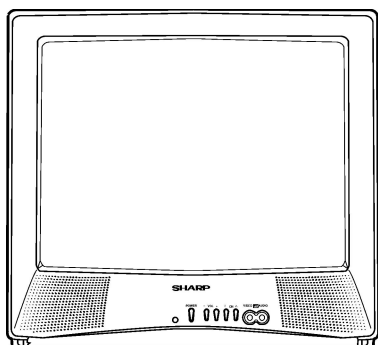


SHARP

SERVICE MANUAL

S59G719L-M100



COLOR TELEVISION

Chassis No. SN-80

MODELS 19L-M100, CL19M10 19L-M100S, 20ML10

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

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ELECTRICAL SPECIFICATIONS

POWER INPUT 120 V AC 60 Hz
 POWER RATING
 19L-M100 82 W
 19L-M100S, CL19M10, 20ML10 84 W
 PICTURE SIZE 1,194cm² (185sq inch)
 CONVERGENCE Magnetic
 SWEEP DEFLECTION Magnetic
 FOCUS Hi-Bi-Potential Electrostatic
 INTERMEDIATE FREQUENCIES
 Picture IF Carrier Frequency 45.75 MHz
 Sound IF Carrier Frequency 41.25 MHz
 Color Sub-Carrier Frequency 42.17 MHz
 (Nominal)

AUDIO POWER
 OUTPUT RATING 0.9 W (at 10% distortion)
 SPEAKER
 SIZE 8 cm (Round)
 VOICE COIL IMPEDANCE 8 ohm at 400 Hz
 ANTENNA INPUT IMPEDANCE
 VHF/UHF 75 ohm Unbalanced
 TUNING RANGES
 VHF-Channels 2 thru 13
 UHF-Channels 14 thru 69
 CATV Channels 1 thru 125
 (EIA, Channel Plan U.S.A.)

Specifications are subject to change without prior notice.

SHARP CORPORATION

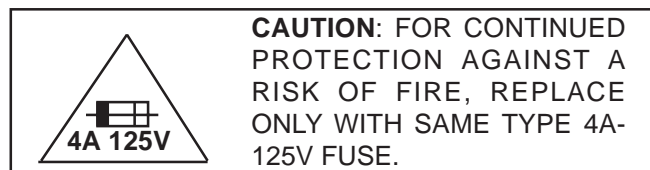
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 The contents are subject to change without notice.

IMPORTANT SERVICE SAFETY PRECAUTION

- **Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines which follow:**

WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.
3. Semiconductor heat sinks are potential shock hazards when the chassis is operating.
4. The chassis in this receiver has two ground systems which are separated by insulating material. The non-isolated (hot) ground system is for the B+ voltage regulator circuit and the horizontal output circuit. The isolated ground system is for the low B+ DC voltages and the secondary circuit of the high voltage transformer.
To prevent electrical shock use an isolation transformer between the line cord and power receptacle, when servicing this chassis.



SERVICING OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

When servicing the high voltage system, remove the static charge by connecting a 10k ohm resistor in series with an insulated wire (such as a test probe) between the picture tube ground and the anode lead. (AC line cord should be disconnected from AC outlet.)

1. Picture tube in this receiver employs integral implosion protection.
2. Replace with tube of the same type number for continued safety.
3. Do not lift picture tube by the neck.
4. Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage anode completely.

X-RADIATION AND HIGH VOLTAGE LIMITS

1. Be sure all service personnel are aware of the procedures and instructions covering X-radiation. The only potential source of X-ray in current solid state TV receivers is the picture tube. However, the picture tube does not emit measurable X-Ray radiation, if the high voltage is as specified in the "High Voltage Check" instructions.
It is only when high voltage is excessive that X-radiation is capable of penetrating the shell of the picture tube including the lead in the glass material. The important precaution is to keep the high voltage below the maximum level specified.
2. It is essential that servicemen have available at all times an accurate high voltage meter.
The calibration of this meter should be checked periodically.
3. High voltage should always be kept at the rated value -no higher. Operation at higher voltages may cause a failure of the picture tube or high voltage circuitry and;also, under certain conditions, may produce radiation in exceeding of desirable levels.
4. When the high voltage regulator is operating properly there is no possibility of an X-radiation problem. Every time a color chassis is serviced, the brightness should be tested while monitoring the high voltage with a meter to be certain that the high voltage does not exceed the specified value and that it is regulating correctly.
5. Do not use a picture tube other than that specified or make unrecommended circuit modifications to the high voltage circuitry.
6. When troubleshooting and taking test measurements on a receiver with excessive high voltage, avoid being unnecessarily close to the receiver.
Do not operate the receiver longer than is necessary to locate the cause of excessive voltage.

IMPORTANT SERVICE SAFETY PRECAUTION

(Continued)

BEFORE RETURNING THE RECEIVER

(Fire & Shock Hazard)

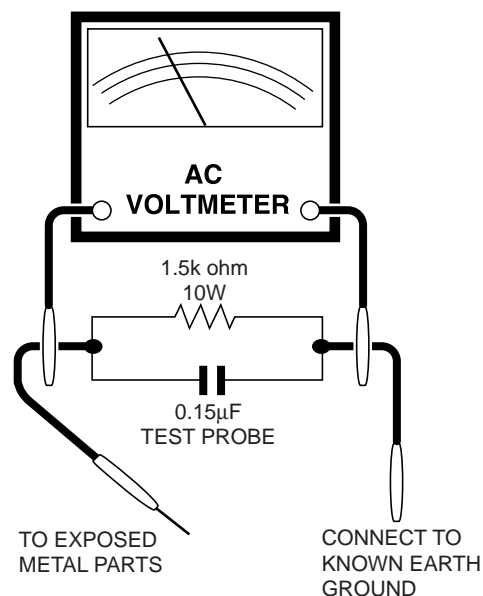
Before returning the receiver to the user, perform the following safety checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators and etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.
 - Plug the AC cord directly into a 120 volt AC outlet, (Do not use an isolation transformer for this test).
 - Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15mF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to earth ground.
 - Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity to measure the AC voltage drop across the resistor.

- Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon and etc.) and measure the AC voltage drop across the resistor.

All checks must be repeated with the AC ine cord plug connection reversed. (If necessary, a non-polarized adapter plug must be used only for the purpose of completing these check.)

Any current measured must not exceed 0.5 milliamp. Any measurements not within the limits outlined above indicate of a potential shock hazard and corrective action must be taken before returning the instrument to the customer.



SAFETY NOTICE

Many electrical and mechanical parts in television receivers have special safety-related characteristics. These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage and etc. Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "⚠" and shaded areas in the Replacement Parts Lists and Schematic Diagrams.

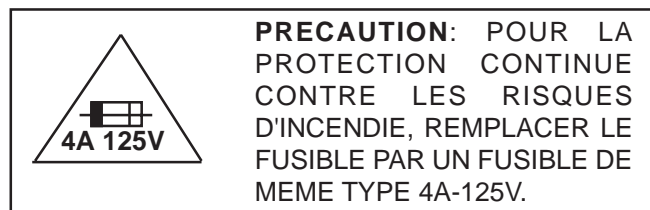
For continued protection, replacement parts must be identical to those used in the original circuit. The use of substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire, X-radiation or other hazards.

PRECAUTIONS A PRENDRE LORS DE LA REPARATION

- **Ne peut effectuer la réparation qu' un technicien spécialisé qui s'est parfaitement accoutumé à toute vérification de sécurité et aux conseils suivants.**

AVERTISSEMENT

1. N'entreprendre aucune modification de tout circuit. C'est dangereux.
2. Débrancher le récepteur avant toute réparation.
3. Les déversoirs thermiques à semi-conducteurs peuvent présenter un danger de choc électrique lorsque le récepteur est en marche.
4. Le châssis de ce récepteur possède deux systèmes de masse qui sont séparées par du matériel d'isolation. Le système de masse non-isolée (sous tension) est pour le circuit du régulateur de tension + B et le circuit de sortie horizontale. Le système de masse isolée est pour les tensions DC + B basses et le circuit secondaire du transformateur haute tension. Pour éviter tout risque d'électrocution lors de l'entretien de ce châssis, utiliser un transformateur d'isolation entre le cordon de ligne et la prise de courant.



REPARATION DU SYSTEME A HAUTE TENSION ET DU TUBE-IMAGE

Lors de la réparation de ce système, supprimer la charge statique en branchant une résistance de 10 k Ω en série avec un fil isolé (comme une sonde d'essai) entre la mise à la terre du tube-image et le fil d'anode. (Le cordon d'alimentation doit être retiré de la prise murale.)

1. Le tube image dans ce récepteur emploie une protection intégrée contre l'implosion.
2. Par mesure de sécurité, changer le tube-image pour un tube du même numéro de type.
3. Ne pas lever le tube-image par son col.
4. Ne manipuler le tube-image qu'en portant des lunettes incassables et qu'après avoir déchargé totalement la haute tension.

LIMITES DES RADIATIONS X ET DE LA HAUTE TENSION

1. Tout le personnel réparateur doit être instruit des instructions et procédés relatifs aux radiations X. Le tube-image, seule source de rayons X dans les téléviseurs transistorisés, n'émet pourtant pas de rayons mesurables si la haute tension est maintenue à un niveau préconisé dans la section "Vérification de la haute tension". C'est seulement quand la haute tension est excessive que les rayons X peuvent entrer dans l'enveloppe du tube-image y compris le conducteur de verre. Il est important de maintenir la haute tension en-dessous du niveau spécifié.
2. Il est essentiel que le réparateur ait sous la main un voltmètre à haute tension qui doit être périodiquement étalonné.
3. La haute tension doit toujours être maintenue à la valeur de régime -et pas plus haute. L'opération à des tensions plus élevées peut entraîner une panne du tube-image ou du circuit à haute tension et, dans certaines conditions, peut entraîner une radiation dépassant les niveaux prescrits.
4. Quand le régulateur à haute tension fonctionne correctement, il n'y a aucun problème de radiation X. Chaque fois qu'un châssis couleurs est réparé, la luminosité doit être examinée tout en contrôlant la haute tension à l'aide d'un voltmètre pour s'assurer que la haute tension ne dépasse pas la valeur spécifiée et qu'elle soit correctement réglée.
5. Ne pas utiliser un tube-image autre que celui spécifié et ne pas effectuer de modifications déconseillées du circuit à haute tension.
6. Lors de la recherche des pannes et des mesures d'essai sur un récepteur qui présente une haute tension excessive, éviter de s'approcher inutilement du récepteur.
Ne pas faire fonctionner le récepteur plus longtemps que nécessaire pour localiser la cause de la tension excessive.

PRECAUTIONS A PRENDRE LORS DE LA REPARATION

(Suite)

VERIFICATIONS CONTRE L'INCENDIE ET LE CHOC ELECTRIQUE

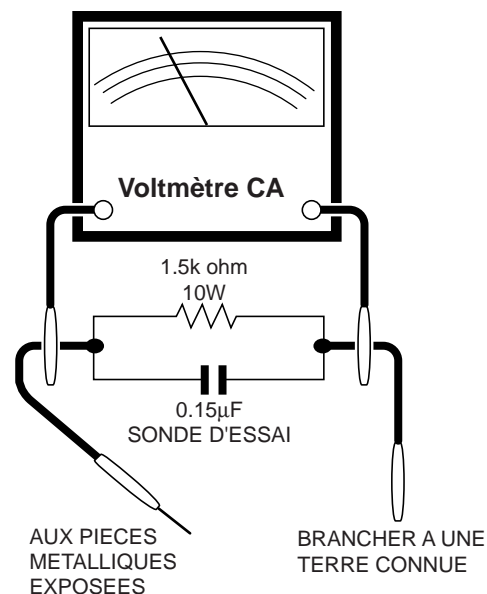
Avant de rendre le récepteur à l'utilisateur, effectuer les vérifications suivantes.

1. Inspecter tous les faisceaux de câbles pour s'assurer que les fils ne soient pas pincés ou qu'un outil ne soit pas placé entre le châssis et les autres pièces métalliques du récepteur.
2. Inspecter tous les dispositifs de protection comme les boutons de commande non-métalliques, les isolants, le dos du coffret, les couvercles ou blindages de réglage et de compartiment, les réseaux de résistance-capacité, les isolateurs mécaniques, etc.
3. S'assurer qu'il n'y ait pas de danger d'électrocution en vérifiant la fuite de courant, de la façon suivante:
 - Brancher le cordon d'alimentation directement à une prise de courant de 120V. (Ne pas utiliser de transformateur d'isolation pour cet essai).
 - A l'aide de deux fils à pinces, brancher une résistance de 1,5 k Ω 10 watts en parallèle avec un condensateur de 0,15 μ F en série avec toutes les pièces métalliques exposées du coffret et une terre connue comme une conduite électrique ou une prise de terre branchée à la terre.
 - Utiliser un voltmètre CA d'une sensibilité d'au moins 5000W/V pour mesurer la chute de tension en travers de la résistance.

- Toucher avec la sonde d'essai les pièces métalliques exposées qui présentent une voie de retour au châssis (antenne, coffret métallique, tête des vis, arbres de commande et des boutons, écusson, etc.) et mesurer la chute de tension CA en-travers de la résistance. Toutes les vérifications doivent être refaites après avoir inversé la fiche du cordon d'alimentation. (Si nécessaire, une prise d'adaptation non polarisée peut être utilisée dans le but de terminer ces vérifications.)

Tous les courants mesurés ne doivent pas dépasser 0,5 mA.

Dans le cas contraire, il y a une possibilité de choc électrique qui doit être supprimée avant de rendre le récepteur au client.



AVIS POUR LA SECURITE

De nombreuses pièces, électriques et mécaniques, dans les téléviseurs présentent des caractéristiques spéciales relatives à la sécurité, qui ne sont souvent pas évidentes à vue. Le degré de protection ne peut pas être nécessairement augmentée en utilisant des pièces de remplacement étalonnées pour haute tension, puissance, etc.

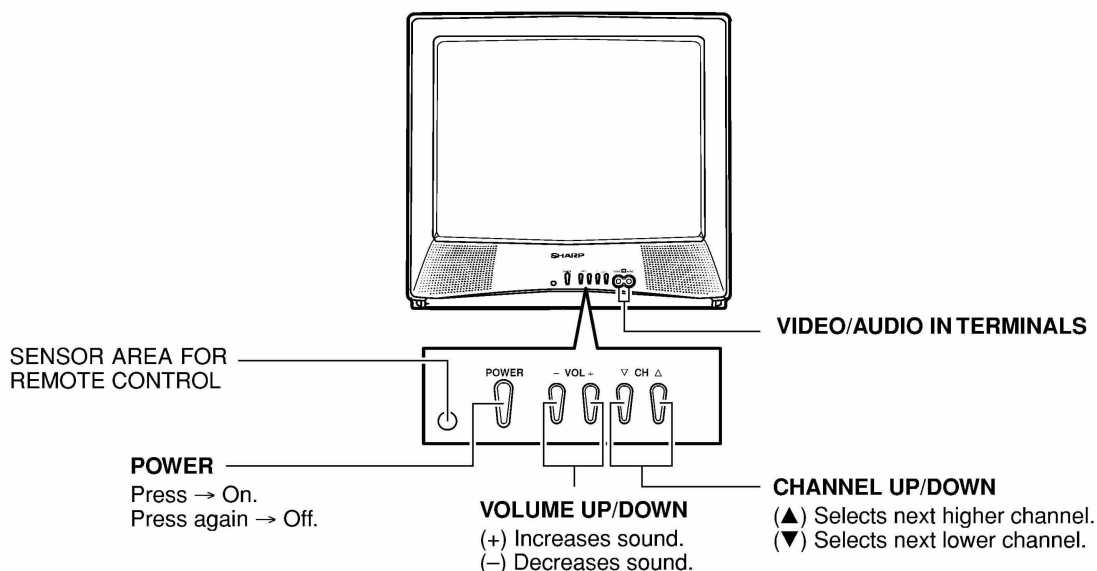
Les pièces de remplacement qui présentent ces caractéristiques sont identifiées dans ce manuel; les pièces électriques qui présentent ces particularités sont

identifiées par la marque " ⚠ " et hachurées dans la liste des pièces de remplacement et les diagrammes schématiques.

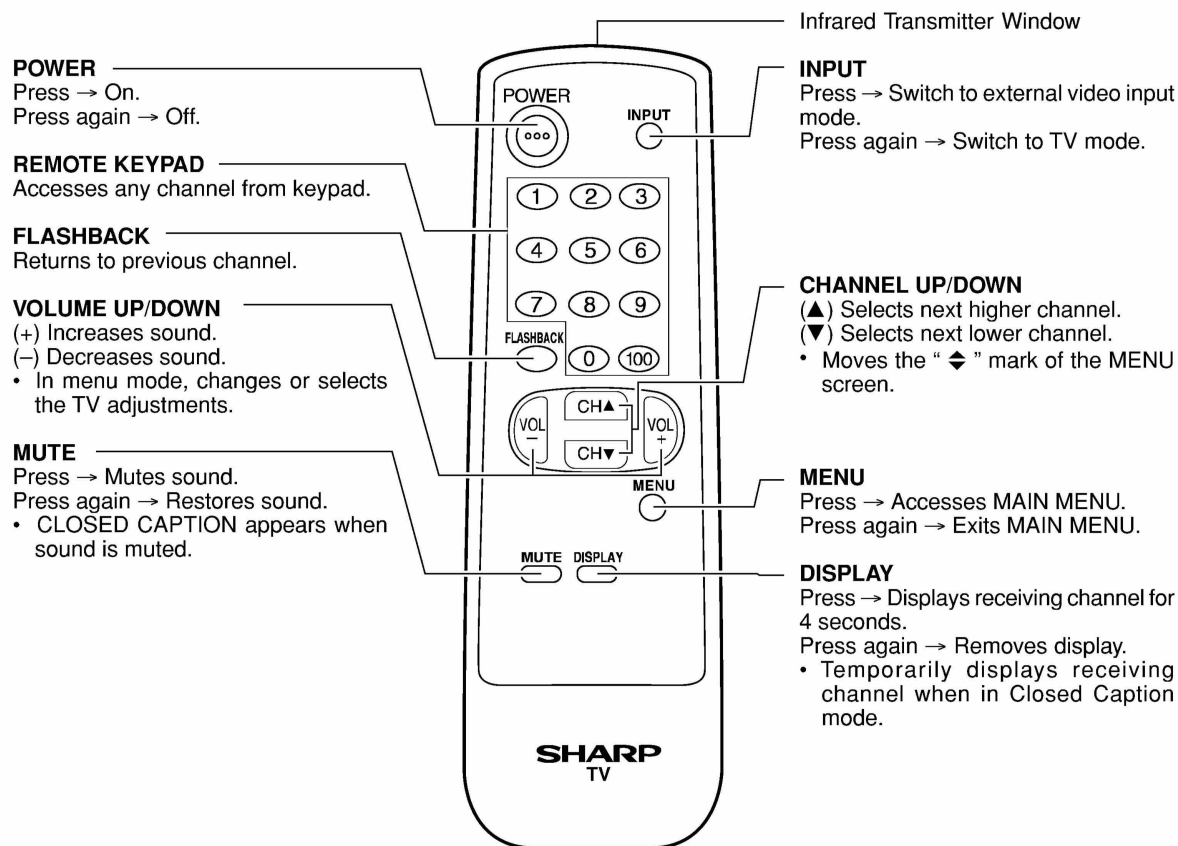
Pour assurer la protection, ces pièces doivent être identiques à celles utilisées dans le circuit d'origine. L'utilisation de pièces qui n'ont pas les mêmes caractéristiques que les pièces recommandées par l'usine, indiquées dans ce manuel, peut provoquer des électrocutions, incendies, radiations X ou autres accidents.

LOCATION OF USER'S CONTROL

Front Panel



Basic Remote Control Functions



INSTALLATION AND SERVICE INSTRUCTIONS

Note: (1) When performing any adjustments to resistor controls and transformers use non-metallic screwdrivers or TV alignment tools.

(2) Before performing adjustments, the TV set must be on at least 15 minutes.

CIRCUIT PROTECTION

The receiver is protected by a 4.0A fuse (F701), mounted on PWB-A, wired into one side of the AC line input.

X-RADIATION PROTECTOR CIRCUIT TEST

After service has been performed on the horizontal deflection system, high voltage system, +B system, test the X-Radiation protection circuit to ascertain proper operation as follows:

- 1) Apply 120V AC using a variac transformer for accurate input voltage.
- 2) Allow for warm up and adjust all customer controls for normal picture and sound.
- 3) Receive a good local channel.
- 4) Connect a digital voltmeter to TP653 and make sure that the voltmeter reads 21.3 ± 1.5 V.
- 5) Apply external 28.9V DC at TP653 by using an external DC supply, TV must be shut off.
- 6) To reset the protector, unplug the AC cord and make a short circuit between TP651 and TP652. Now make sure that normal picture appears on the screen.
- 7) If the operation of the horizontal oscillator does not stop in step 5, the circuit must be repaired before the set is returned to the customer.

HIGH VOLTAGE CHECK

High voltage is not adjustable but must be checked to verify that the receiver is operating within safe and efficient design limitations as specified checks should be as follows:

1. Connect an accurate high voltage meter between ground and anode of picture tube.
2. Operate receiver for at least 15 minutes at 120V AC line voltage, with a strong air signal or a properly tuned in test signal.
3. Enter the service mode and select the service adjustment "S19" and Bus data "01" (Y-mute on).
4. The voltage should be approximately, 26.0kV (at zero beam).

If a correct reading cannot be obtained, check circuitry for malfunctioning components. After the voltage test, make Y-mute off to the normal mode.

For adjustments of this model, the bus data is converted to various analog signals by the D/A converter circuit.

Note: There are still a few analog adjustments in this series such as focus and master screen voltage. Follow the steps below whenever the service adjustment is required. See "Table-B" to determine, if service adjustments are required.

1. Service mode

Before putting unit into the service mode, check that customer adjustments are in the normal mode. Use the reset function in the video adjustment menu to ensure customer controls are in their proper (reset) position.

2. Service number selection

Once in the service mode, press the Ch-up or Ch-down button on the remote controller or at the set. The service adjustment number will vary in increments of one, from "S01" to "OP". Select the item you wish to adjust.

3. Data number selection

Press the Vol-up or down button to adjust the data number.

To enter the service mode and exit service mode.

While pressing the Vol-up and Ch-up buttons at the sametime, plug the AC cord into a wall socket. Now the TV set is switched on and enters the service mode.

To exit the service mode, turn the television off by pressing the power button.

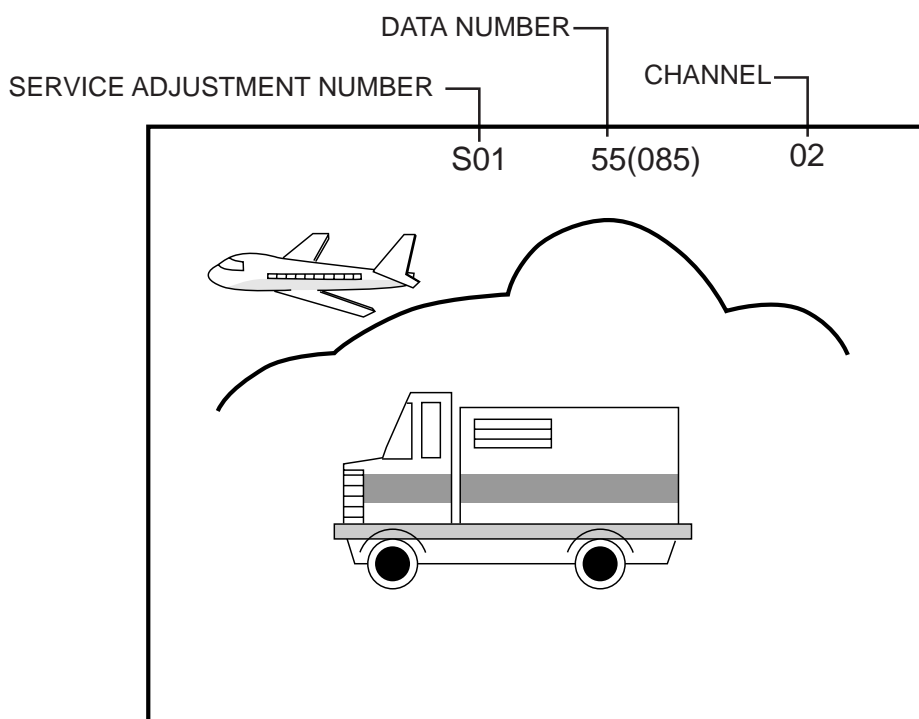


Figure A.

SERVICE NUMBER	ADJUSTMENT ITEM	DATA		ADJUSTMENT CONTENTS
		INITIAL VALUE	RANGE	
S01	PICTURE	55	00-7F	Must be set to "24" Must be set to "00" ~ "03"
S02	TINT	46	00-7F	
S03	COLOR	32	00-7F	
S04	BRIGHTNESS	40	00-7F	
S05	SHARPNESS	28	00-3F	
S06	VERTICAL PHASE	00	00-07	
S07	HORIZONTAL PHASE	12	00-1F	
S08	RF-AGC	23	00-3F	
S09	VERTICAL AMP	20	00-3F	
S10	VCO	2C	00-7F	
S11	R CUT-OFF	00	00-FF	Must be set to "00" Must be set to "20"
S12	G CUT -OFF	00	00-FF	
S13	B CUT-OFF	00	00-FF	
S14	G GAIN	7F	00-FF	
S15	B GAIN	7F	00-FF	
S16	TRAP(3.58MHz)	00	00 or 01	
S17	BALANCE	20	00-3F	
S18	C.C.POSITION	17	00-7F	
S19	Y-MUTE	00	00,01,03	
S20	ENERGY SAVE OFFSET	20	00-3F	
S21	D.D.E. OFFSET	03	00-1F	"00" = NORMAL, "01" = No Y, "03" = No VERTICAL Must be set to "23" Must be set to "03" Must be set to "00" Must be set to "00" Must be set to "02"
S22	OSD SETUP	00	00-03	
S23	TUNER SETUP	00	00-01	
OP	OPTION	30	00-FF	

Table - A

Holding down both the CH-up/down buttons on the TV set at service mode for more than 2 seconds will automatically write the above initial values into IC2101.

PART REPLACED	ADJUSTMENT		NOTES
	NECESSARY	UNNECESSARY	
IC2001		X	Data is stored in IC2101.
IC201	X		The adjustment is needed to compensate for characteristics of parts including IC201.
IC2101	X		Holding down both the CH-up/down buttons on the TV set in the service mode for more than 2 seconds will automatically write the above initial values into IC2101.
CRT	X		Adjust items related to picture tube only.

Table - B

■ SERVICE ADJUSTMENT

VCO Adjustment

1. Connect a digital voltmeter between pin (44) of IC201 and ground.
2. Receive a good local channel.
3. Enter the service mode and select the service adjustment "S10".
4. Adjust the data so that digital voltmeter reads 2.2V.
5. Adjustment is completed, remove the voltmeter, return to "normal" mode.

RF AGC Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S08".
3. Set the data value to point where no noise or beat appears.
4. Select another channel to confirm that no noise or beat appears.

Note 1: You will have to come out of the service mode to select another channel.

Note 2: Setting the data to "00" will produce a black raster.

Screen Adjustment

1. Connect a digital voltmeter between TP852 and TP853 on the CRT Unit.

Note: These test points may not be provided.

Then connect the voltmeter to both ends of R852 located near Q852 on the foil side.

2. Receive a good local channel.
3. Enter the service mode and select the service adjustment "S03" and set the data value to "00" to set the color level to minimum. (Record original data code under adjustment "S03" before changing) You may skip this step, if you selected a B/W picture or monoscope pattern.
4. Select the service adjustment "S19" and adjust the data value to "01", this turn off the luminance signal (Y-mute).
5. Select the service adjustment "S04" and adjust data value to obtain 0.17 volts on the digital voltmeter.
6. Adjust the master screen control until the raster darkens to the point where raster is barely seen.
7. Adjust the service adjustments "S11" red, "S12" green and "S13" blue to obtain a good grey scale with normal whites at low brightness level.
8. Select the service adjustment "S19" and reset data to "00". Select the service adjustment "S03" and reset data to obtain normal color level.
9. Remove digital voltmeter, and reset the master screen control to obtain normal brightness range.

White Balance Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S03" and set to "00" (minimum color)(Record original data code under adjustment "S03" before changing). "S03" does not have to be adjusted, if you selected a B/W picture or monoscope pattern.
3. Alternately adjust the service adjustment data of "S14" and "S15" until a good grey scale with normal whites is obtained.
4. Select the service adjustment "S03" and adjust data to obtain normal color level.

Sub-Picture Adjustment

1. Receive a good local channel.
2. Make sure the customer picture control is set to maximum.
3. Enter the service mode and select the service adjustment "S01".
4. Adjust the data value to achieve normal contrast range.

Sub-Tint Adjustment

1. Receive a good local channel.
2. Set customer tint control to center of it's range.
3. Enter the service mode and select the service adjustment "S02".
4. Adjust "S02" data value to obtain normal flesh tones.

Sub-Color Adjustment

1. Receive a good local channel.
2. Make sure the customer color control is set to center position .
3. Enter the service mode and select service adjustment "S03".
4. Adjust "S03" data value to obtain normal color level.

Sub-Brightness Adjustment

1. Receive a good local channel.
2. Make sure the customer brightness control is set to center position.
3. Enter the service mode and select the service adjustment "S04".
4. Adjust "S04" data value to obtain normal brightness level.

Vertical-Size Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S09".
3. While observing the top and bottom of the screen, adjust "S09" data value to proper vertical size.

Vertical Phase Adjustment

1. Enter the service mode and select the service adjustment "S06".
2. Adjust data value to "00" ~ "03".

Note: This must be set "00" ~ "03" when changed data retrace line will appear.

Horizontal Position Adjustment

1. Have unit receive a good local channel.
2. Enter the service mode and select the service adjustment "S07".
3. Adjust "S07" data value so that picture is centered.

Caption Position Adjustment (Horizontal)

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S18".
3. A black text box appears on the screen. (see **Figure B.** below)
4. Adjust "S18" data value so that text box is positioned in the center of the screen.

3.58MHz Trap Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S16".
3. This is a two position adjustment, "00" is ON, "01" is OFF.
4. Adjust data value to "00" for normal viewing.

Sharpness, Audio Balance, Energy Save Offset, DDE Offset, OSD Setup, Tuner Setup and Option Adjustments

1. Receive a good local channel.
2. Enter the service mode and select the service adjustments "S05" for sharpness, "S17" for balance, "S20" for energy save offset, "S21" for DDE offset, "S22" for OSD setup, "S23" for tuner and "OP" for option.

• Sharpness Adjustment

3. Adjust data value to "24" (center of data range) for sharpness adjustment.

• Audio Balance Adjustment

4. Adjust data value to "20" (center of data range) for audio balance adjustment.

• Energy Save Offset Adjustment

5. Adjust data value to "23".

• DDE Offset Adjustment

6. Adjust data value to "03".

• OSD Setup Adjustment

7. Adjust data value to "00".

• Tuner Setup Adjustment

8. Adjust data value to "00".

• Option Adjustment

9. Adjust data value to "02".

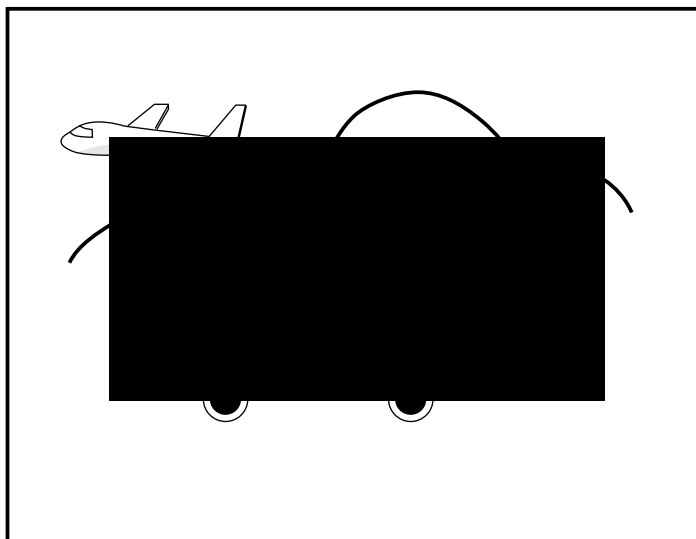
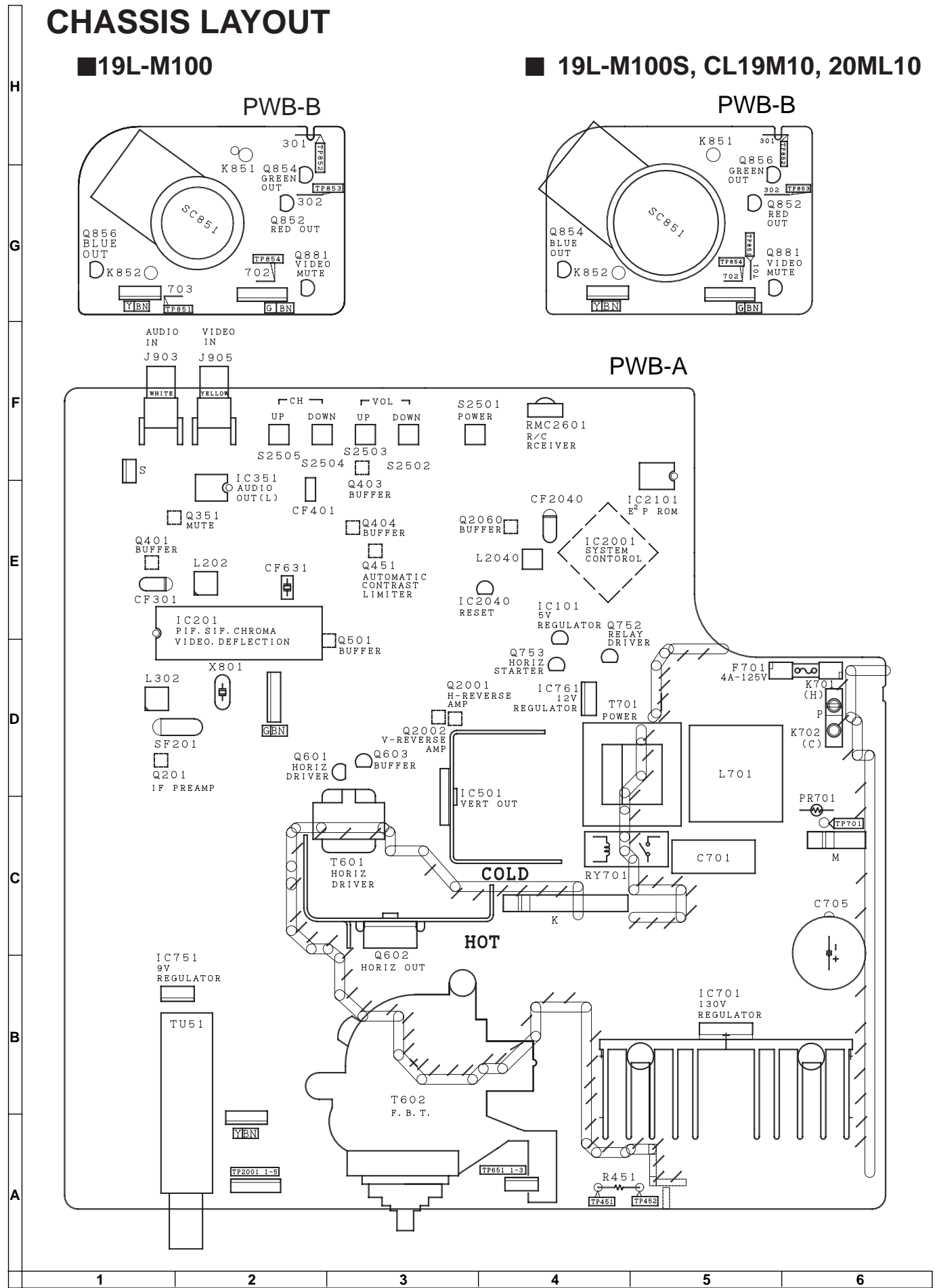


Figure B.

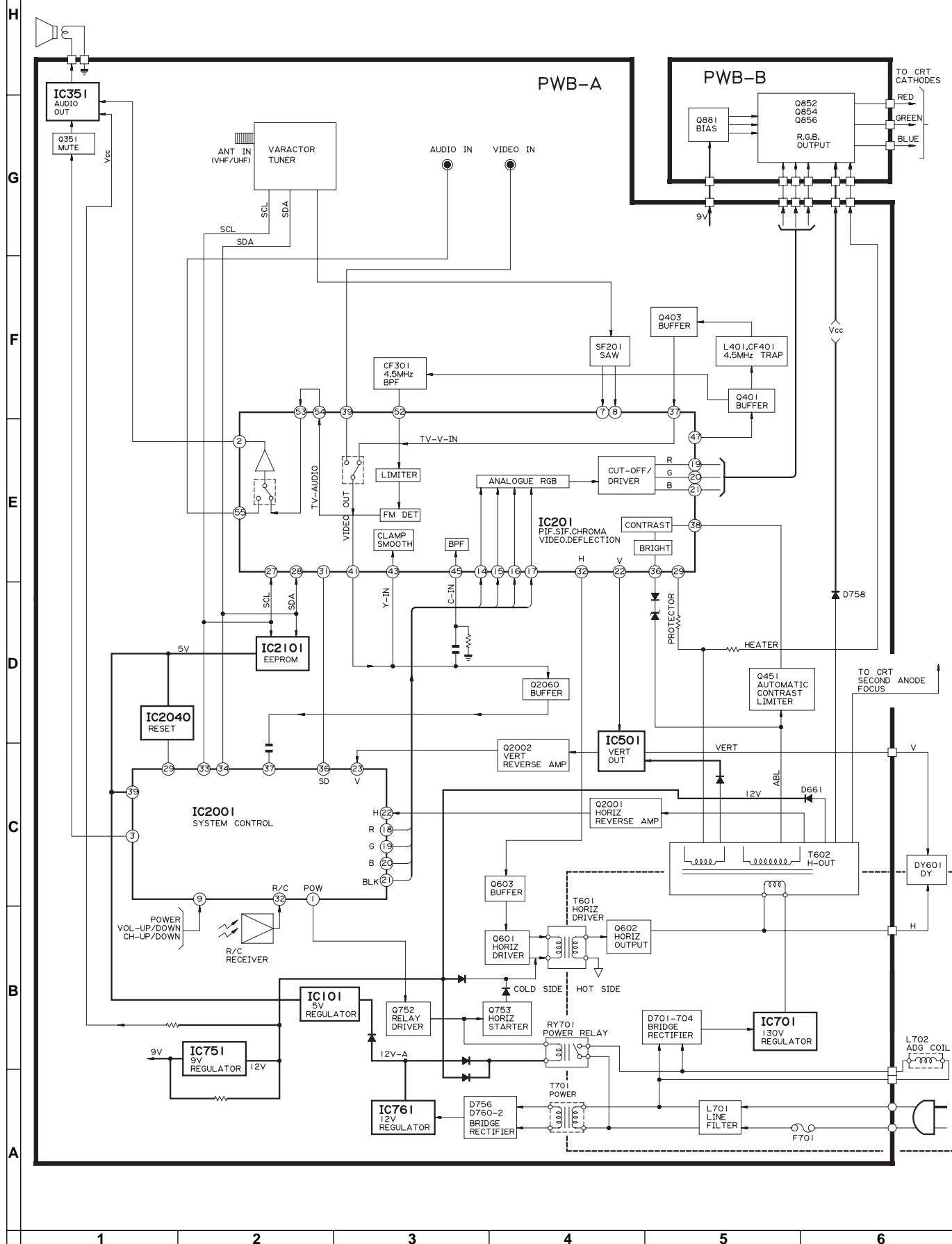
CHASSIS LAYOUT

■ 19L-M100

■ 19L-M100S, CL19M10, 20ML10



BLOCK DIAGRAM



DESCRIPTION OF SCHEMATIC DIAGRAM

NOTES:

1. The unit of resistance "ohm" is omitted.
($K=k\Omega$, $M=M\Omega$)
2. All resistors are 1/16 watt, unless otherwise noted.
3. All capacitors are μF , unless otherwise noted.
($P=pF=\mu\mu F$)
4. (G) indicates $\pm 2\%$ tolerance may be used.
5. \perp indicates line isolated ground.
6. \downarrow indicates hot ground.

VOLTAGE MEASUREMENT CONDITIONS:

1. All DC voltages are measured with DVM connected between points indicated and chassis ground, line voltage set at 120V AC and all controls set for normal picture unless otherwise indicated.
2. All voltages measured with 1000 μ V B & W or Color signal.

WAVEFORM MEASUREMENT CONDITIONS:

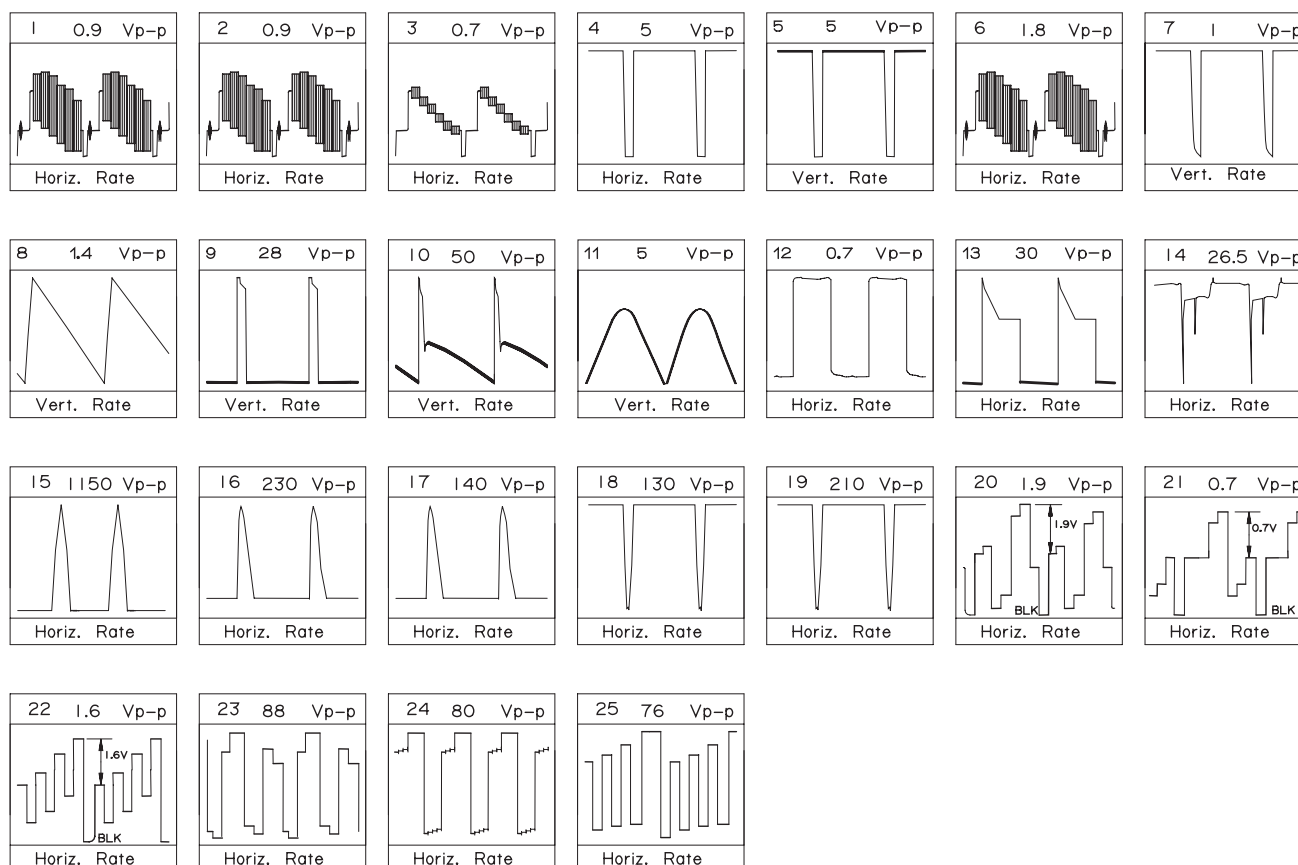
1. Photographs taken on a standard gated color bar signal, the tint setting adjusted for proper color. The wave shapes at the red, green and blue cathodes of the picture tube depend on the tint, color level and picture control.
2. \odot indicates waveform check points (See chart, waveforms are measured from point indicated to chassis ground.)

\triangle AND SHADED () COMPONENTS
= SAFETY RELATED PARTS.
 \blacktriangle MARK= X-RAY RELATED PARTS.

DRGANNES MARQUES \triangle ET HACHRES ():
PIECES RELATIVES A LA SECURITE.
MARQUE \blacktriangle : PIECS RELATIVE AUX RAYONS X.

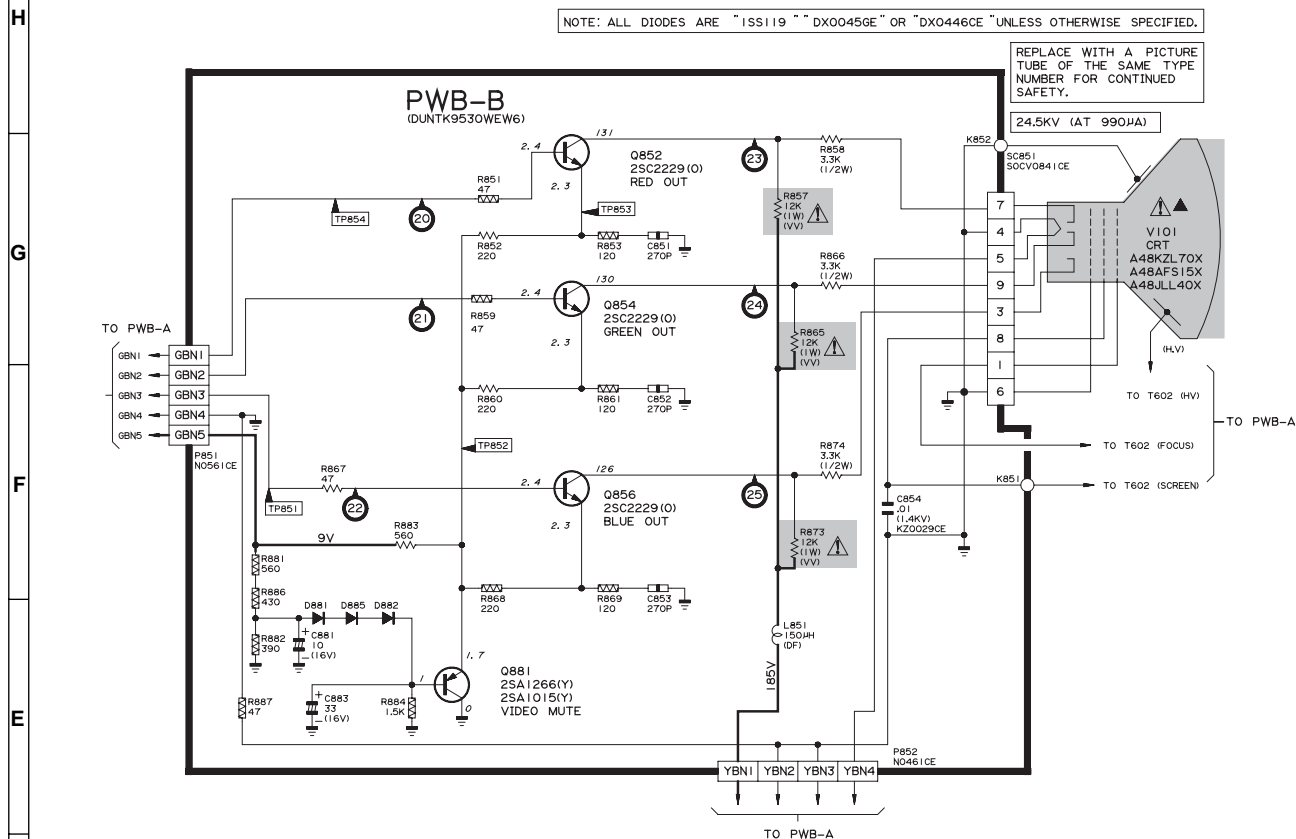
This circuit diagram is a standard one, printed circuits may be subject to change for product improvement without prior notice.

WAVEFORMS

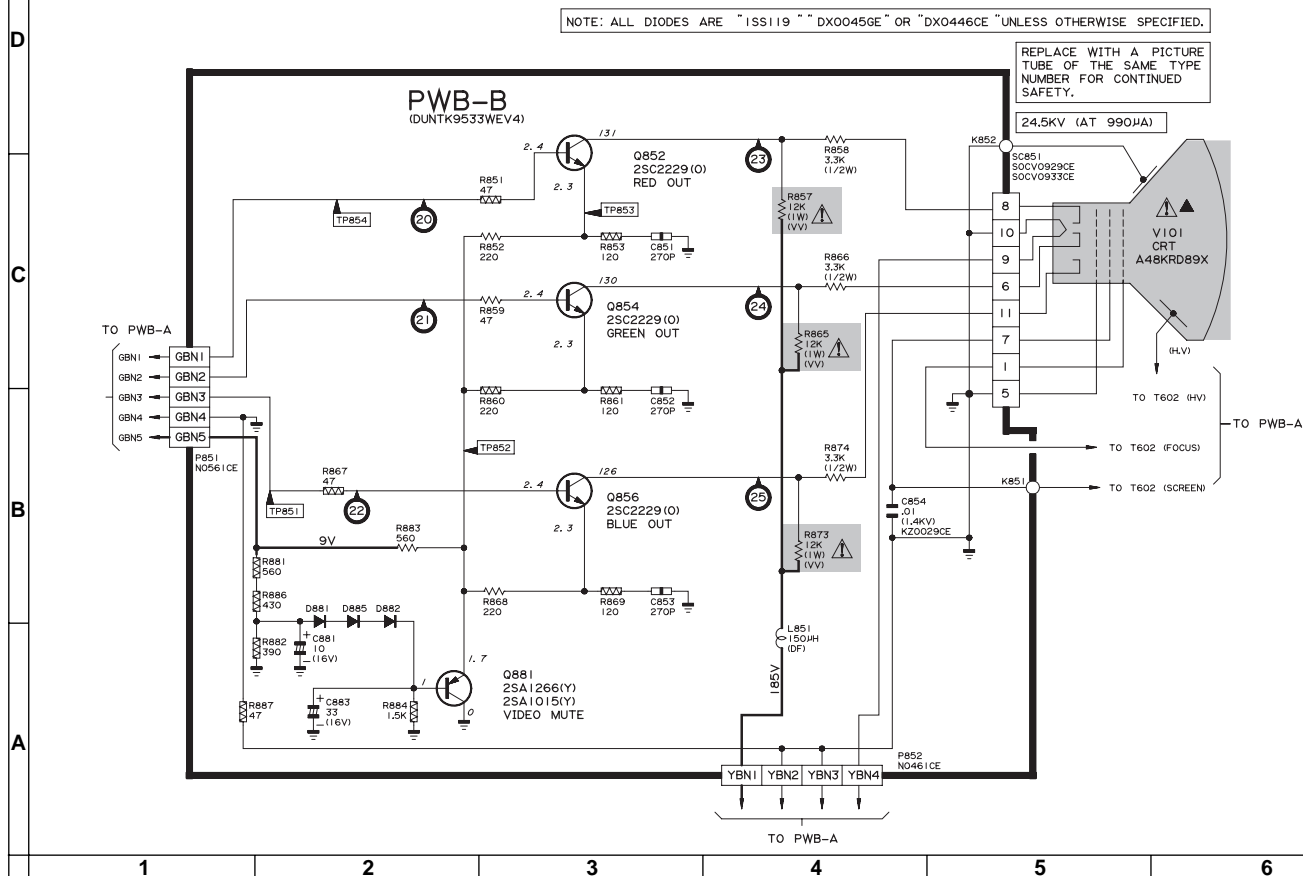


SCHEMATIC DIAGRAM: CRT UNIT

19L-M100

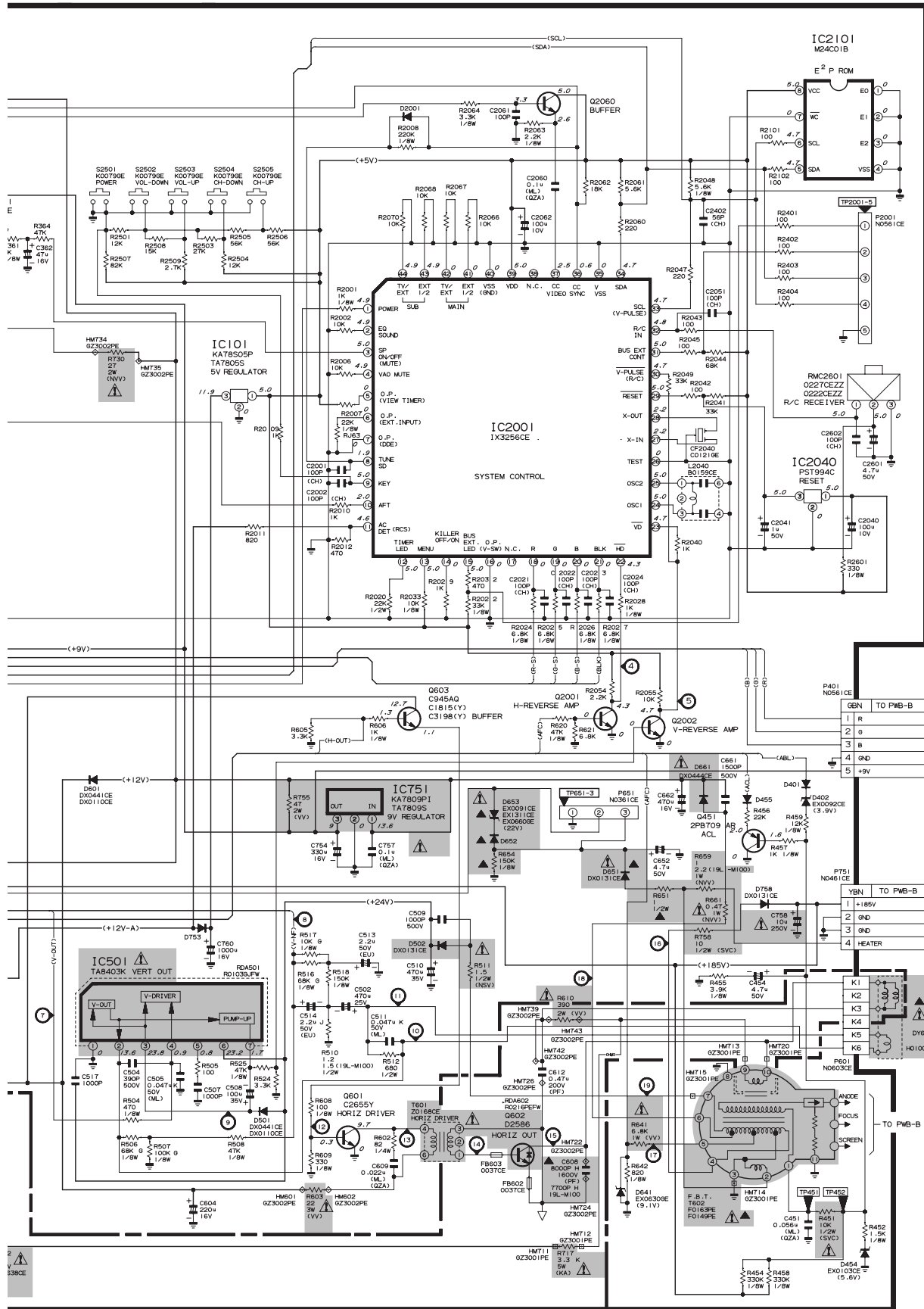


19L-M100S, CL19M10, 20ML10





NOTE: ALL DIODES ARE *ISSI19* UNLESS OTHERWISE SPECIFIED.
*ALL TRANSISTORS ARE *2SC2462* OR *2PD601A* UNLESS OTHERWISE SPECIFIED.

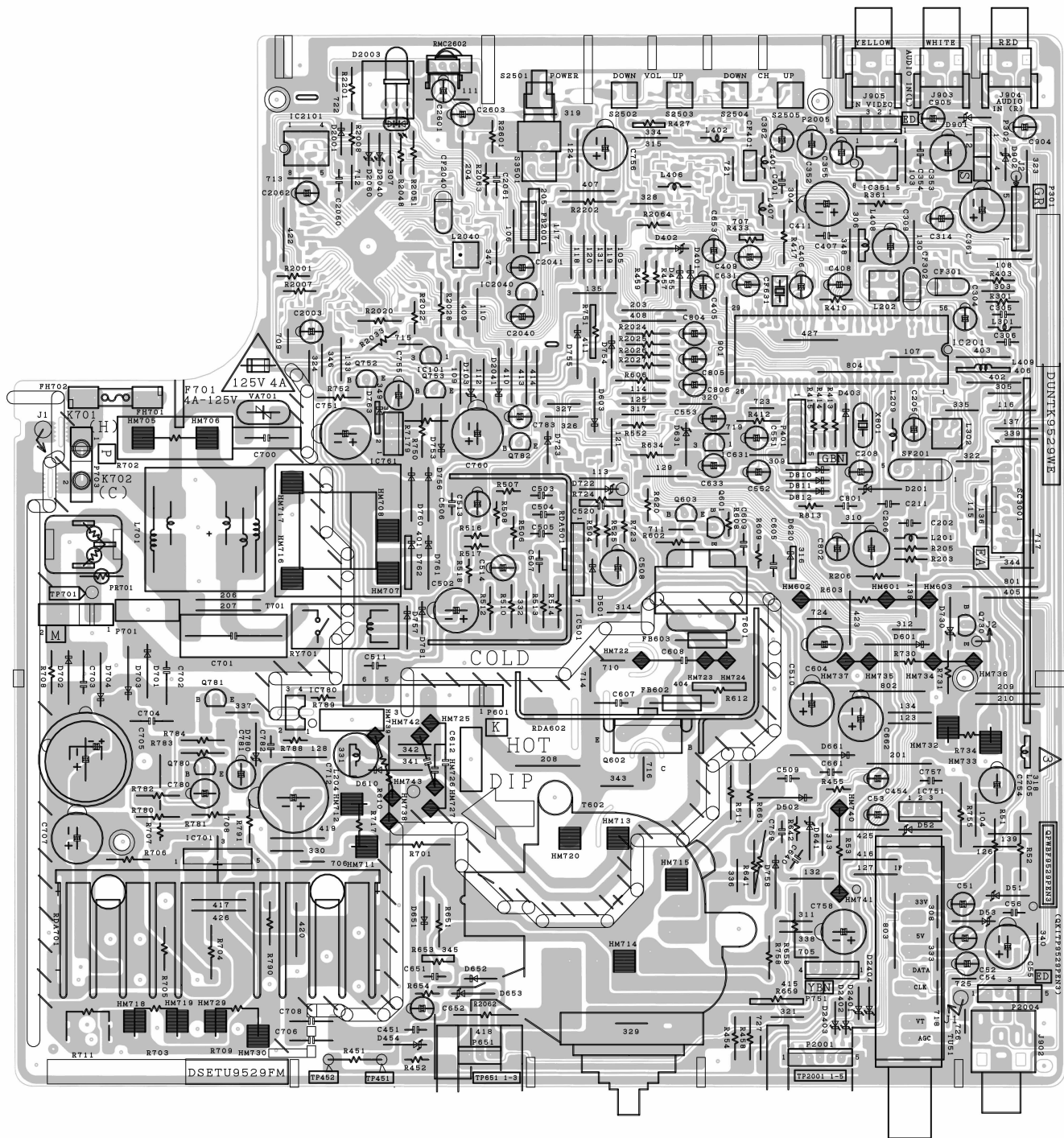


10	11	12	13	14	15	16	17	18	19
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PRINTED WIRING BOARD ASSEMBLIES

■ 19L-M100

H
G
F
E
D
C
B
A



PWB-A: MAIN Unit (Wiring Side)

1

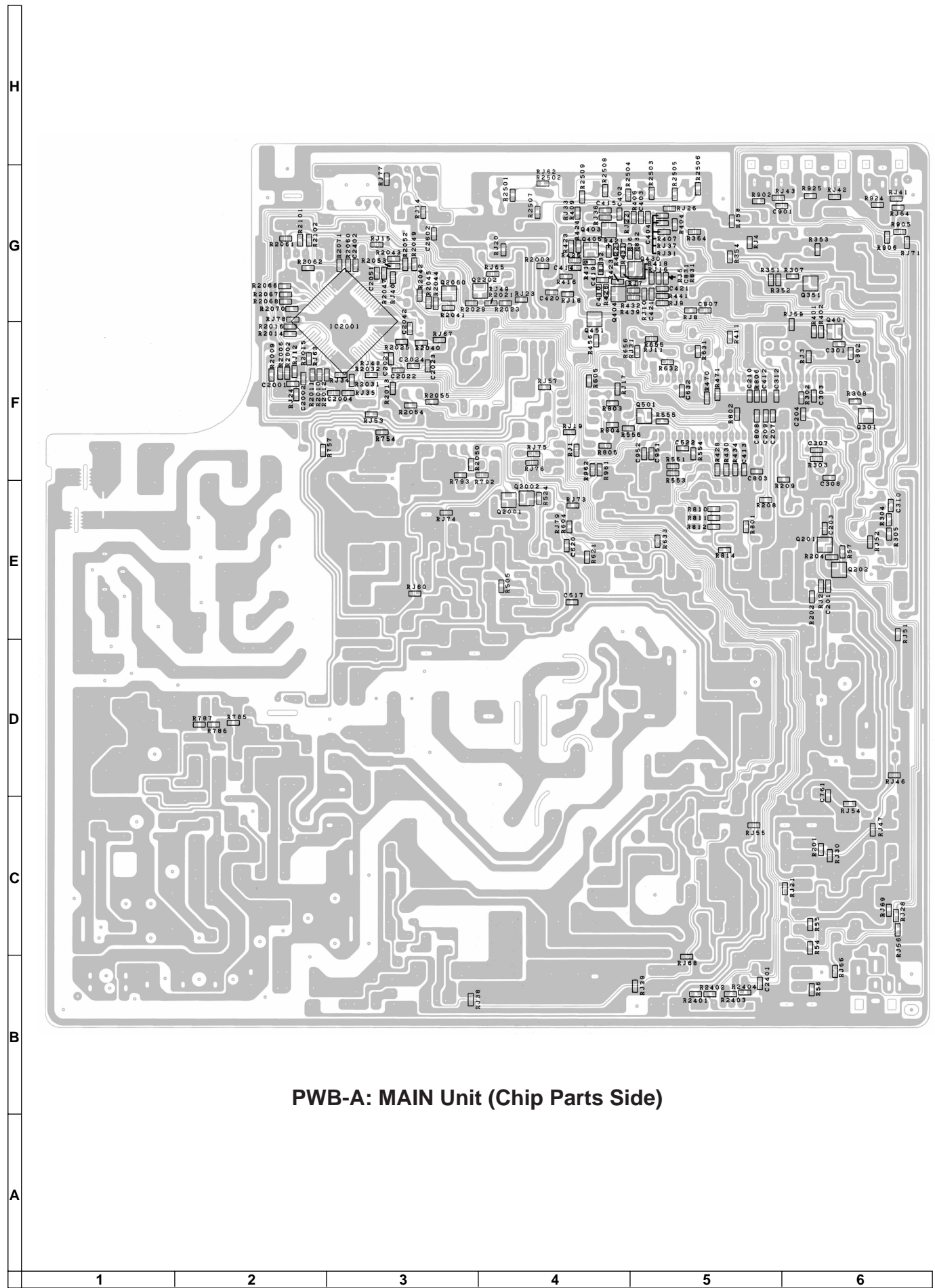
2

3

4

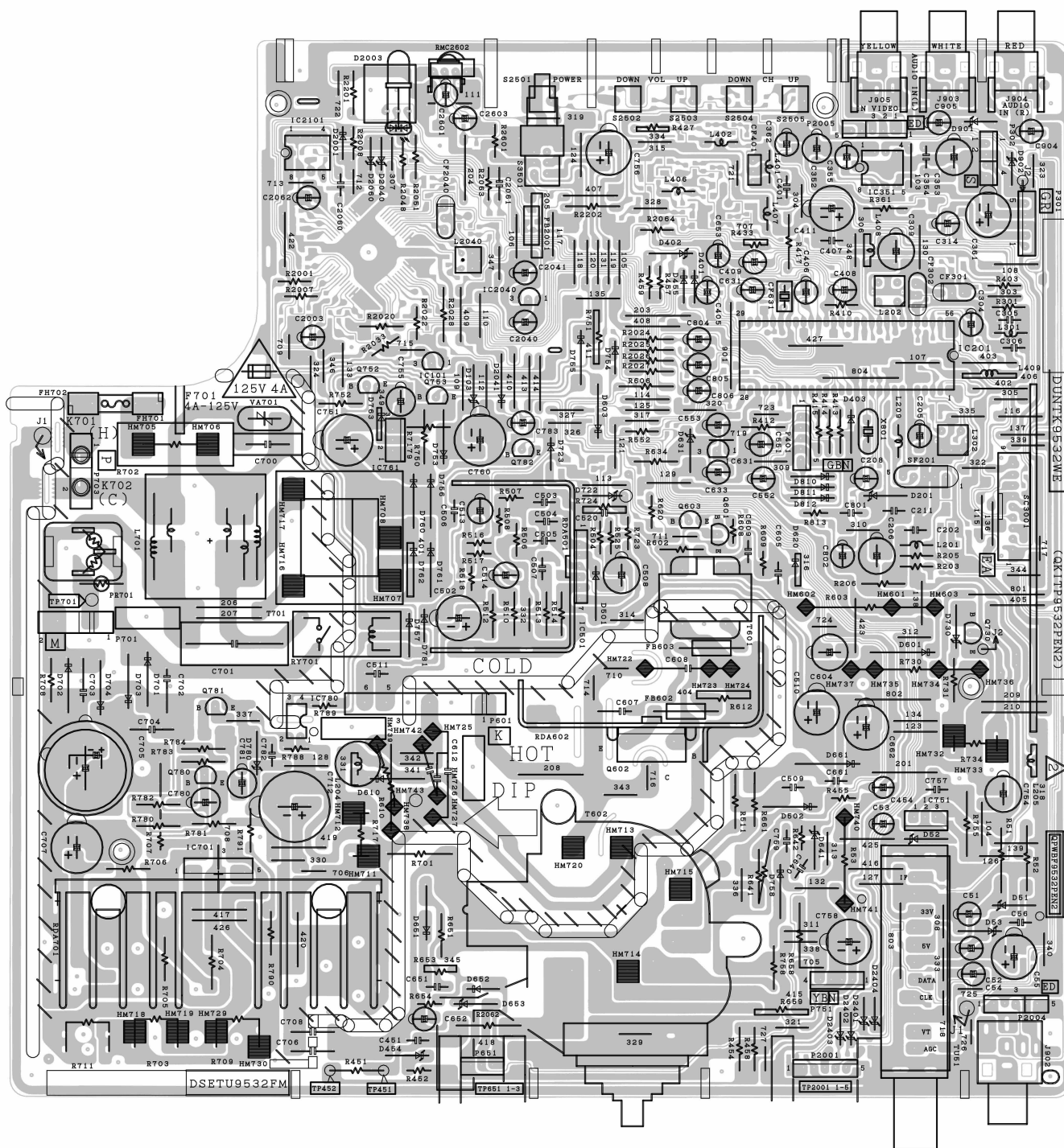
5

6



PWB-A: MAIN Unit (Chip Parts Side)

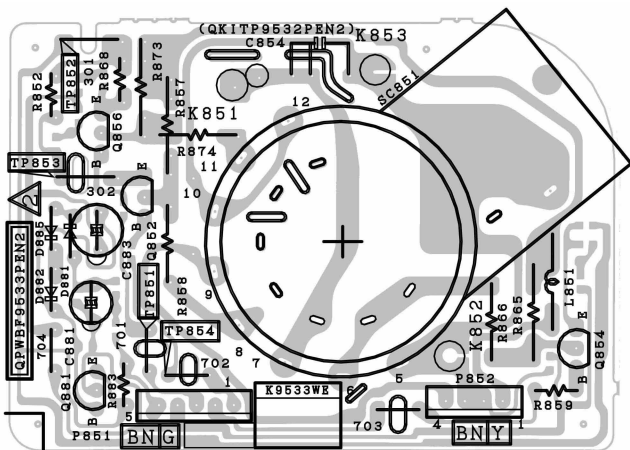
19L-M100S, CL19M10, 20ML10



PWB-A: MAIN Unit (Wiring Side)




■ 19L-M100S, CL19M10, 20ML10



PWB-B: CRT Unit (Chip Parts Side)

PARTS LIST

PARTS REPLACEMENT

Replacement parts which have these special safety characteristics identified in this manual; electrical components having such features are identified by  and shaded areas in the Replacement Parts Lists and Schematic Diagrams. The use of a substitute replacement part which does not have the same safety characteristic as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following information.

- | | |
|-----------------|----------------|
| 1. MODEL NUMBER | 2. REF. NO. |
| 3. PART NO. | 4. DESCRIPTION |

in **USA**: Contact your nearest SHARP Parts Distributor to order.
For location of SHARP Parts Distributor, Please call Toll-Free; 1-800-BE-SHARP

★ MARK : SPARE PARTS-DELIVERY SECTION

▲ MARK : X- RAY RELATED PARTS

Ref. No.	Part No.	★	Description	Code
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PICTURE TUBE


19L-M100				
▲▲ V101	VB48AFS15X/*S	M	Picture Tube	CC
	or			
	VB48KZL70X/*S			
	or			
	VB48JLL40X/*S			
▲▲ DY601	RCiLH0099MEZZ	M	Deflection Yoke	AY
▲ L702	RCiLG0014MEZZ	M	Degaussing Coil	
	PMAGF3006CEZZ	J	Magnet Ass'y	AK
	QEARC2016PEZZ	R	Grounding Part	
19L-M100S, CL19M10, 20ML10				
▲▲ V101	VB48KRD89X/3E	M	Picture Tube	
▲▲ DY601	RCiLH0100MEZZ	M	Deflection Yoke	AZ
▲ L702	RCiLG0014MEZZ	M	Degaussing Coil	AM
	MSPRT0002MEZZ	M	Spring for CRT	AA
			(19L-M100S, 20ML10)	
	PMAGF3003CEZZ	J	Magnet Ass'y	AK
	QEARC2016PEZZ	R	Grounding Part	

PRINTED WIRING BOARD ASSEMBLIES (NOT REPLACEMENT ITEM)

PWB-A DUNTK9529WEW6	-	MAIN Unit (19L-M100)	—
PWB-A DUNTK9532WEV4	-	MAIN Unit (19L-M100S)	—
PWB-A DUNTK9532WEV5	-	MAIN Unit (CL19M10)	—
PWB-A DUNTK9532WEV6	-	MAIN Unit (20ML10)	—
PWB-B DUNTK9530WEW6	-	CRT Unit (19L-M100)	—
PWB-B DUNTK9533WEV4	-	CRT Unit (19L-M100S, CL19M10, 20ML10)	—

LISTE DES PIECES

CHANGE DES PIECES

Les pièces de rechange qui présentent ces caractéristiques spéciales de sécurité, sont identifiées dans ce manuel : les pièces électriques qui présentent ces particularités, sont repérées par la marque  et sont hachurées dans les listes de pièces et dans les diagrammes schématisés.

La substitution d'une pièce de rechange par une autre qui ne présente pas les mêmes caractéristiques de sécurité que la pièce recommandée par l'usine et dans ce manuel de service, peut provoquer une électrocution, un incendie ou tout autre sinistre.

"COMMENT COMMANDER LES PIECES DE RECHANGE"

Pour que votre commande soit rapidement et correctement remplie, veuillez fournir les renseignements suivants.

- | | |
|---------------------|----------------|
| 1. NUMERO DU MODELE | 2. NO. DE REF |
| 3. NO. DE PIECE | 4. DESCRIPTION |

in **CANADA**: Contact SHARP Electronics of Canada Limited
Phone (416) 890-2100

★MARQUE : SECTION LIVRAISON DES PIECES DE RECHANGE

▲ MARQUE : PIECES RELATIVE AUX RAYONS X

Ref. No.	Part No.	★	Description	Code
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PWB-A: DUNTK9529WEV6 (19L-M100) MAIN UNIT

TUNER

NOTE: THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY

▲ TU51 VTU115B8035AH M Tuner

INTEGRATED CIRCUITS

IC101	VHiKA78S05P-1	J	KA78S05P	AD
	or			
	VHiTA7805S/-1			
▲▲ IC201	RH-iX3253CEZZ	J	TA1268AN	AV
	IC351 VHiTDA7233/-1	J	TDA7233	AF
▲ IC501	VHiTA8403K/-1	J	TA8403K	AL
▲▲ IC701	VHiSTR301301E	J	STR30130	AP
▲ IC751	VHiKA7809Pi-1	R	KA7809PI	AE
	or			
	VHiTA7809S/-1			
▲ IC761	VHiKA7812Pi-1	R	KA7812PI	AE
	or			
	VHiTA7812S/-1			
IC2001	RH-iX3256CEZZ	J	TMPA8701CMF142	AX
IC2040	VHiPST994C/-1	J	PST994C	AD
IC2101	VHiM24C01B/-1	J	M24C01-BN6	AF

TRANSISTORS

You can substitute "VS2SC2462-C-1" for "VS2SD601AR/-1".

Q201	VS2SC2735//1E	J	2SC2735	AC
Q351	VS2SD601AR/-1	J	2SD601AR	AC
Q401	VS2SD601AR/-1	J	2SD601AR	AC
Q403	VS2SD601AR/-1	J	2SD601AR	AC
Q404	VS2SB709AR/-1	J	2SB709AR	AC
Q451	VS2SB709AR/-1	J	2SB709AR	AC
Q501	VS2SD601AR/-1	J	2SD601AR	AC
Q601	VS2SC2655Y/-1	J	2SC2655(Y)	AE
▲ Q602	VS2SD2586//1E	J	2SD2586	AM
	or			
	VS2SD2095//1E			

Ref. No.	Part No.	★	Description	Code
PWB-A : DUNTK9529WEV6 (19L-M100)				
MAIN UNIT (Continued)				
Q603	VS2SC945AQ/-1	J	2SC945	AB
	or			
	VS2SC1815YW-1			
	or			
	VS2SC3198-Y-1			
Q752	VS2SC945AQ/-1	J	2SC945	AB
	or			
	VS2SC1815YW-1			
	or			
	VS2SC3198-Y-1			
Q753	VS2SA1013//1E	J	2SA1013	AD
Q2001	VS2SD601AR/-1	J	2SD601	AC
Q2002	VS2SD601AR/-1	J	2SD601	AC
Q2060	VS2SD601AR/-1	J	2SD601	AC

DIODES

You can substitute "RH-DX0045GEZZ" or "RH-DX0446GEZZ" for "VHD1SS119//1".

D51	RH-EX0611GEZZ	J	Zener Diode, 5.1V	AA
D52	RH-EX0676GEZZ	J	Zener Diode, 32V	AA
	or			
	RH-EX0701GEZZ			
D53	RH-EX0611GEZZ	J	Zener Diode, 5.1V	AA
D401	VHD1SS119//1	J	Diode	AB
D402	RH-EX0092CEZZ	J	Zener Diode, 3.9V	AB
D454	RH-EX0103CEZZ	J	Zener Diode, 5.6V	AB
D455	VHD1SS119//1	J	Diode	AB
D501	RH-DX0441CEZZ	J	Diode	AC
	or			
	RH-DX0110CEZZ			
△ D502	RH-DX0131CEZZ	J	Diode	AC
D601	RH-DX0441CEZZ	J	Diode	AC
	or			
	RH-DX0110CEZZ			
D603	RH-DX0441CEZZ	J	Diode	AC
	or			
	RH-DX0110CEZZ			
D631	RH-EX0630GEZZ	J	Zener Diode, 9.1V	AA
D641	RH-EX0630GEZZ	J	Zener Diode, 9.1V	AA
▲▲ D651	RH-DX0131CEZZ	J	Diode	AC
▲▲ D652	VHD1SS119//1	J	Diode	AB
▲▲ D653	RH-EX0091CEZZ	J	Zener Diode, 22V	AB
	or			
	RH-EX0660GEZZ			
	or			
	RH-EX1311CEZZ			
△ D661	RH-DX0444CEZZ	J	Diode	AH
△ D701	RH-DX0154CEZZ	J	Diode	AC
△ D702	RH-DX0154CEZZ	J	Diode	AC
△ D703	RH-DX0154CEZZ	J	Diode	AC
△ D704	RH-DX0154CEZZ	J	Diode	AC
D753	VHD1SS119//1	J	Diode	AB
D754	VHD1SS119//1	J	Diode	AB
D755	RH-DX0441CEZZ	J	Diode	AC
	or			
	RH-DX0110CEZZ			
△ D756	RH-DX0441CEZZ	J	Diode	AC
	or			
	RH-DX0110CEZZ			
D757	VHD1SS119//1	J	Diode	AB
D758	RH-DX0131CEZZ	J	Diode	AC
△ D760	RH-DX0441CEZZ	J	Diode	AC
	or			
	RH-DX0110CEZZ			
△ D761	RH-DX0441CEZZ	J	Diode	AC
	or			
	RH-DX0110CEZZ			
△ D762	RH-DX0441CEZZ	J	Diode	AC
	or			
	RH-DX0110CEZZ			
D763	VHD1SS119//1	J	Diode	AB

D2001	VHD1SS119//1	J	Diode	AB
PACKAGED CIRCUITS				
△ PR701	RMPTP0026CEZZ	J	Packaged Circuit	AF
X801	RCRSB0205CEZZ	J	Crystal	AF
	or			
	RCRSB0001PEZZ			
FILTERS				
CF301	RFiLC0403CEZZ	J	Ceramic Filter	AE
	or			
	RFiLC0029TAZZ			
CF401	RFiLC0013CEZZ	J	Ceramic Filter	AE
	or			
	RFiLC0004PEZZ			
CF631	RFiLA0034CEZZ	J	Ceramic Filter	AD
CF2040	RFiLC0121GEZZ	J	Ceramic Filter	AD
SF201	RFiLC0405CEZZ	J	SAW Filter	AH

COILS

L201	VP-XF1R2K0000	J	Peaking 1.2μH	AB
L202	RCiLi0612CEZZ	J	VCO Coil	AE
	or			
	RCiLi0588CEZZ			
L301	VP-XF8R2K0000	J	Peaking 8.2μH	AB
L302	RCiLi0613CEZZ	J	IF Coil	AE
	or			
	RCiLi0605CEZZ			
L401	VP-XF120K0000	J	Peaking 12μH	AB
L402	VP-XF100K0000	J	Peaking 10μH	AB
L406	VP-XF680K0000	J	Peaking 68μH	AB
L408	VP-XF100K0000	J	Peaking 10μH	AB
△ L701	RCiLF0029PEZZ	R	Coil	AH
	or			
	RCiLF0087CEZZ			
	or			
	RCiLF0235CEZZ			
L2040	RCiLB0159CEZZ	J	Oscillation Coil	AE

TRANSFORMERS

△ T601	RTRNZ0168CEZZ	J	Transformer	AH
▲△ T602	RTRNF0163PEZZ	R	H-Volt Transformer	BE
	or			
	RTRNF0149PEZZ			
△ T701	RTRNP0527CEZZ	J	Power Transformer	AM
	or			
	RTRNP0518CEZZ			

CAPACITORS

[EL... Electrolytic, M-Poly... Metalized Polypro Film]

C51	VCEA0A1CW476M	J	47 16V EL.	AB
C52	VCSATA1CE226K	J	22 16V Tantalum	AD
C53	VCEA0A1HW105M	J	1.0 50V EL.	AB
C54	VCEA0A1HW475M	J	4.7 50V EL.	AB
C55	VCEA0A1CW477M	J	470 16V EL.	AC
C201	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C202	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C203	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C204	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C205	VCEA0A1HW474M	J	0.47 50V EL.	AB
C206	VCEA0A1CW227M	J	220 16V EL.	AC
C207	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C208	VCEA0A1HW474M	J	0.47 50V EL.	AB
C209	VCKYCY1HB222K	J	2200p 50V Ceramic	AA
C210	VCKYCY1HB102K	J	1000p 50V Ceramic	AA
C302	VCCCCY1HH330J	J	33p 50V Ceramic	AA
C303	VCKYCY1HB472K	J	4700p 50V Ceramic	AA
C304	VCEA0A1HW225M	J	2.2 50V EL.	AB
C305	VCKYPA1HB151K	J	150p 50V Ceramic	AA
C306	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C308	VCKYCY1HB102K	J	1000p 50V Ceramic	AA
C309	VCEA0A1CW227M	J	220 16V EL.	AC
C312	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C314	VCEA0A1HW225M	J	2.2 50V EL.	AB
C351	VCKYCY1HB562K	J	5600p 50V Ceramic	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
PWB-A : DUNTK9529WEV6 (19L-M100)									
MAIN UNIT (Continued)									
C352	VCEA0A1CW107M	J	100 16V EL.	AC	C757	RC-QZA104TAYK	J	0.1 50V Mylar	AB
C353	VCEA0A1CW337M	J	330 16V EL.	AC	△ C758	VCEAGA2EW106M	J	10 250V EL.	AC
C354	RC-QZA104TAYK	J	0.1 50V Mylar	AB	C760	VCEAGA1CW108M	J	1000 16V EL.	AD
C355	VCEA0A1CW226M	J	22 16V EL.	AB	C801	RC-QZA223TAYK	J	0.022 50V Mylar	AB
C361	VCEA0A1CW477M	J	470 16V EL.	AC	C802	VCEA0A1HW474M	J	0.47 50V EL.	AB
C362	VCEA0A1CW476M	J	47 16V EL.	AB	C803	VCCCCY1HH120J	J	12p 50V Ceramic	AA
C403	VCCCCY1HH101J	J	100p 50V Ceramic	AA	C804	VCEA0A1HW104M	J	0.1 50V EL.	AB
C404	VCCCCY1HH680J	J	68p 50V Ceramic	AA	C805	VCEA0A1HW104M	J	0.1 50V EL.	AB
C405	VCEA0A1HW335M	J	3.3 50V EL.	AB	C806	VCEA0A1HW104M	J	0.1 50V EL.	AB
C406	VCEA0A1HW335M	J	3.3 50V EL.	AB	C807	VCCCCY1HH820J	J	82p 50V Ceramic	AA
C407	RC-QZA104TAYK	J	0.1 50V Mylar	AB	C901	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA
C408	VCEA0A1CW106M	J	10 16V EL.	AB	C905	VCEA0A1HW335M	J	3.3 50V EL.	AB
C409	VCEA0A1HW105M	J	1.0 50V EL.	AB	C2001	VCCCCY1HH101J	J	100p 50V Ceramic	AA
C410	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C2002	VCCCCY1HH101J	J	100p 50V Ceramic	AA
C411	VCEAGA1CW108M	J	1000 16V EL.	AD	C2021	VCCCCY1HH101J	J	100p 50V Ceramic	AA
C413	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA	C2022	VCCCCY1HH101J	J	100p 50V Ceramic	AA
C414	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C2023	VCCCCY1HH101J	J	100p 50V Ceramic	AA
C419	VCCCCY1HH330J	J	33p 50V Ceramic	AA	C2024	VCCCCY1HH101J	J	100p 50V Ceramic	AA
C420	VCCCCY1HH471J	J	470p 50V Ceramic	AA	C2040	VCEA0A1AW107M	J	100 10V EL.	AB
C451	RC-QZA563TAYK	J	0.056 50V Mylar	AB	C2041	VCEA0A1HW105M	J	1.0 50V EL.	AB
C454	VCEA0A1HW475M	J	4.7 50V EL.	AB	C2051	VCCCCY1HH101J	J	100p 50V Ceramic	AA
C502	VCEA0A1EW477M	J	470 25V EL.	AD	C2060	RC-QZA104TAYK	J	0.1 50V Mylar	AB
C504	VCKYPA2HB391K	J	390p 500V Ceramic	AA	C2061	VCKYD41HB101K	J	100p 50V Ceramic	AA
C505	VQYTA1HM473K	J	0.047 50V Mylar	AB	C2062	VCEA0A1AW107M	J	100 10V EL.	AB
C507	VCKYPA1HB102K	J	1000p 50V Ceramic	AA	C2402	VCCCCY1HH560J	J	56p 50V Ceramic	AA
C508	VCEAGA1VW107M	J	100 35V EL.	AC	C2601	VCEA0A1HW475M	J	4.7 50V EL.	AB
C509	VCKYPA2HB102K	J	1000p 500V Ceramic	AA	C2602	VCCCCY1HH101J	J	100p 50V Ceramic	AA
C510	VCEAGA1VW477M	J	470 35V EL.	AD	RESISTORS				
C511	VQYTA1HM473K	J	0.047 50V Mylar	AB	<i>[M-Ox... Metal Oxide, M-Film ... Metal Film]</i>				
C513	VCEACA1HC225M	J	2.2 50V EL.	AC	RJ1	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C514	VCEACA1HC225J	J	2.2 50V EL.	AC	RJ3	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C517	VCKYCY1HB102K	J	1000p 50V Ceramic	AA	RJ5	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C522	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA	RJ6	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C551	VCSATA1CE225K	J	2.2 16V Tantalum	AB	RJ7	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C552	VCEA0A1HW225M	J	2.2 50V EL.	AB	RJ9	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C604	VCEA0A1CW227M	J	220 16V EL.	AC	RJ10	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
△ C608	VCFFPD3CA772H	J	7700p 1.6kV M-Poly.	AF	RJ15	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C609	RC-QZA223TAYK	J	0.022 50V Mylar	AB	RJ17	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C612	VCFFPJ2EB474J	J	0.47 250V M-Poly.	AF	RJ18	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C631	VCEA0A1HW225M	J	2.2 50V EL.	AB	RJ19	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C632	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA	RJ20	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C633	VCEA0A1HW105M	J	1.0 50V EL.	AB	RJ21	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C652	VCEA0A1HW475M	J	4.7 50V EL.	AB	RJ23	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C653	VCEA0A1CW106M	J	10 16V EL.	AB	RJ24	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C661	VCKYPA2HB152K	J	1500p 500V Ceramic	AA	RJ26	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C662	VCEA0A1CW477M	J	470 16V EL.	AC	RJ31	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
△ C701	RC-FZ027SCEZZ	J	0.047 AC125V Plastic		RJ32	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
	or				RJ35	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
	RC-FZ015SCEZZ				RJ39	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
	or				RJ40	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
	RC-FZ002SCEZZ				RJ46	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
	or				RJ49	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
	RC-FZ059SCEZZ				RJ52	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
	or				RJ54	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
	RC-FZ004SGEZZ				RJ55	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
	or				RJ57	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
	RC-FZ027CUMZZ				RJ59	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C702	VCKYPB2HE103P	J	0.01 500V Ceramic	AB	RJ62	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C703	VCKYPB2HE103P	J	0.01 500V Ceramic	AB	RJ63	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C704	VCKYPB2HE103P	J	0.01 500V Ceramic	AB	RJ66	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
△ C705	RC-EZ1022CEZZ	J	470 200V EL.		RJ67	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
	or				RJ68	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
	RC-EZ0522CEZZ				RJ69	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
△ C706	RC-KZ0092GEZZ	J	3300p AC125V Ceramic	AC	RJ71	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
	or				RJ75	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
	RC-KZ0311CEZZ				RJ77	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C707	VCEAGA2CW226M	J	22 160V EL.	AD	RJ78	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
△ C712	RC-EZ0638CEZZ	J	33 160V EL.	AG	RJ79	VRS-CY1JF000J	J	0 1/16W M-Ox.	AA
C751	VCEA0A1VW477M	J	470 35V EL.	AB	△ R51	VRS-VV3AB331J	J	330 1W M-Ox.	AA
C754	VCEA0A1CW337M	J	330 16V EL.	AC	△ R52	VRS-VV3DB470J	J	47 2W M-Ox.	AA
C755	VCEA0A1CW107M	J	100 16V EL.	AC	△ R53	VRS-VV3LB223J	J	22k 3.0W M-Ox.	AB
C756	VCEAGA1CW108M	J	1000 16V EL.	AD	R54	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
					R55	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
					R56	VRS-CY1JF823J	J	82k 1/16W M-Ox.	AA
					R57	VRS-CY1JF392J	J	3.9k 1/16W M-Ox.	AA

Ref. No.	Part No.	★	Description	Code
PWB-A : DUNTK9529WEV6 (19L-M100)				
MAIN UNIT (Continued)				
R201	VRS-CY1JF221J	J	220 1/16W M-Ox.	AA
R202	VRS-CY1JF122J	J	1.2k 1/16W M-Ox.	AA
R203	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R204	VRS-CY1JF270J	J	27 1/16W M-Ox.	AA
R205	VRD-RA2BE391J	J	390 1/8W Carbon	AA
R206	VRD-RA2EE151J	J	150 1/4W Carbon	AA
R208	VRS-CY1JF391J	J	390 1/16W M-Ox.	AA
R301	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R302	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R303	VRS-CY1JF153J	J	15k 1/16W M-Ox.	AA
R307	VRS-CY1JF333J	J	33k 1/16W M-Ox.	AA
R352	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA
R353	VRS-CY1JF4R7J	J	4.7 1/16W M-Ox.	AA
R354	VRS-CY1JF152J	J	1.5k 1/16W M-Ox.	AA
R361	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
R364	VRS-CY1JF473J	J	47k 1/16W M-Ox.	AA
R401	VRS-CY1JF682J	J	6.8k 1/16W M-Ox.	AA
R403	VRD-RA2BE331J	J	330 1/8W Carbon	AA
R404	VRS-CY1JF391J	J	390 1/16W M-Ox.	AA
R407	VRS-CY1JF471J	J	470 1/16W M-Ox.	AA
R409	VRS-CY1JF471J	J	470 1/16W M-Ox.	AA
R410	VRD-RA2BE563J	J	56k 1/8W Carbon	AA
R411	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R412	VRD-RA2EE561J	J	560 1/4W Carbon	AA
R413	VRD-RA2BE470J	J	47 1/8W Carbon	AA
R414	VRD-RA2BE470J	J	47 1/8W Carbon	AA
R415	VRD-RA2BE470J	J	47 1/8W Carbon	AA
R416	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R417	VRD-RA2BE101J	J	100 1/8W Carbon	AB
R418	VRS-CY1JF152J	J	1.5k 1/16W M-Ox.	AA
R419	VRS-CY1JF472J	J	4.7k 1/16W M-Ox.	AA
R423	VRS-CY1JF222J	J	2.2k 1/16W M-Ox.	AA
R426	VRS-CY1JF271J	J	270 1/16W M-Ox.	AA
R440	VRS-CY1JF821J	J	820 1/16W M-Ox.	AA
△ R451	VRS-SV2HC103J	J	10k 1/2W M-Ox.	AA
R452	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
R454	VRD-RA2BE334J	J	330k 1/8W Carbon	AA
R455	VRD-RA2BE392J	J	3.9k 1/8W Carbon	AA
R456	VRS-CY1JF223J	J	22k 1/16W M-Ox.	AA
R457	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
R458	VRD-RA2BE334J	J	330k 1/8W Carbon	AA
R459	VRD-RA2BE123J	J	12k 1/8W Carbon	AA
R504	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R505	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R506	VRD-RA2BE683G	J	68k 1/8W Carbon	AA
R507	VRD-RA2BE104G	J	100k 1/8W Carbon	AA
R508	VRD-RA2BE473J	J	47k 1/8W Carbon	AA
R510	VRD-RM2HD1R5J	J	1.5 1/2W Carbon	AA
△ R511	VRN-SV2HB1R5J	J	1.5 1/2W M-Film	AB
R512	VRD-RM2HD681J	J	680 1/2W Carbon	AA
R516	VRD-RA2BE683G	J	68k 1/8W Carbon	AA
R517	VRD-RA2BE103G	J	10k 1/8W Carbon	AA
R518	VRD-RA2BE154J	J	150k 1/8W Carbon	AA
R524	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA
R525	VRD-RA2BE473J	J	47k 1/8W Carbon	AA
R552	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
R553	VRS-CY1JF273J	J	27k 1/16W M-Ox.	AA
R554	VRS-CY1JF472J	J	4.7k 1/16W M-Ox.	AA
R555	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R556	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R602	VRD-RA2EE820J	J	82 1/4W Carbon	AA
△ R603	VRS-VV3LB220J	J	22 3.0W M-Ox.	AB
R605	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA
R606	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
R608	VRD-RA2BE101J	J	100 1/8W Carbon	AB
R609	VRD-RA2BE331J	J	330 1/8W Carbon	AA
△ R610	VRS-VV3DB391J	J	390 2W M-Ox.	AA
R620	VRD-RA2BE473J	J	47k 1/8W Carbon	AA
R621	VRS-CY1JF682J	J	6.8k 1/16W M-Ox.	AA
R631	VRS-CY1JF391J	J	390 1/16W M-Ox.	AA
R632	VRS-CY1JF152J	J	1.5k 1/16W M-Ox.	AA
R633	VRS-CY1JF472J	J	4.7k 1/16W M-Ox.	AA

Ref. No.	Part No.	★	Description	Code
R634	VRD-RM2HD121J	J	120 1/2W Carbon	AA
△ R641	VRS-VV3AB682J	J	6.8k 1W M-Ox.	AA
R642	VRD-RA2BE821J	J	820 1/8W Carbon	AA
△ R651	VRD-RM2HD1R0J	J	1.0 1/2W Carbon	AA
△ R654	VRD-RA2BE154J	J	150k 1/8W Carbon	AA
△ R655	VRS-CY1JF104J	J	100k 1/16W M-Ox.	AA
△ R656	VRS-CY1JF273J	J	27k 1/16W M-Ox.	AA
△ R659	VRN-VV3AB2R2J	J	2.2 1W M-Film	AA
△ R661	VRN-VV3ABR47J	J	0.47 1W M-Film	AA
△ R701	RR-HZ0046CEZZ	J	2.7M 1/2W Solid	AD
or				
RH-DZ0047CEZZ				
or				
VRC-UB2HG275K				
△ R702	VRW-KP3HC1R8K	J	1.8 5W Cement	AC
△ R703	VRS-KA3NG681J	J	680 7.0W M-Ox.	AF
△ R704	VRD-RM2HD123J	J	12k 1/2W Carbon	AA
R705	VRD-RA2EE334J	J	330k 1/4W Carbon	AA
R706	VRD-RM2HD470J	J	47 1/2W Carbon	AA
△ R707	VRN-VV3DB1R5J	J	1.5 2W M-Film	AB
△ R708	VRD-RM2HD824J	J	820k 1/2W Carbon	AA
△ R709	VRS-KA3NG681J	J	680 7.0W M-Ox.	AF
△ R711	VRS-KA3NG681J	J	680 7.0W M-Ox.	AF
△ R717	VRS-KA3HG3R3K	J	3.3 5W M-Ox.	AD
△ R730	VRS-VV3DB270J	J	27 2W M-Ox.	AA
△ R750	VRS-VV3AB561J	J	560 1W M-Ox.	AA
R752	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R754	VRS-CY1JF471J	J	470 1/16W M-Ox.	AA
△ R755	VRS-VV3DB470J	J	47 2W M-Ox.	AA
R757	VRS-CY1JF472J	J	4.7k 1/16W M-Ox.	AA
△ R758	VRS-SV2HC100J	J	10 1/2W M-Ox.	AA
R801	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA
R802	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA
R803	VRS-CY1JF182J	J	1.8k 1/16W M-Ox.	AA
R804	VRS-CY1JF182J	J	1.8k 1/16W M-Ox.	AA
R805	VRS-CY1JF182J	J	1.8k 1/16W M-Ox.	AA
R806	VRS-CY1JF333J	J	33k 1/16W M-Ox.	AA
R902	VRS-CY1JF750J	J	75 1/16W M-Ox.	AA
R906	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R925	VRS-CY1JF104J	J	100k 1/16W M-Ox.	AA
R961	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R962	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R2001	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
R2002	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R2006	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R2007	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R2008	VRD-RA2BE224J	J	220k 1/8W Carbon	AA
R2009	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R2010	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R2011	VRS-CY1JF821J	J	820 1/16W M-Ox.	AA
R2012	VRS-CY1JF471J	J	470 1/16W M-Ox.	AA
R2020	VRD-RM2HD223J	J	22k 1/2W Carbon	AA
R2022	VRD-RA2BE333J	J	33k 1/8W Carbon	AA
R2024	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R2025	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R2026	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R2027	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R2028	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA
R2029	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R2032	VRS-CY1JF471J	J	470 1/16W M-Ox.	AA
R2033	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2040	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA
R2041	VRS-CY1JF333J	J	33k 1/16W M-Ox.	AA
R2042	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R2043	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R2044	VRS-CY1JF683J	J	68k 1/16W M-Ox.	AA
R2045	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
R2047	VRS-CY1JF221J	J	220 1/16W M-Ox.	AA
R2048	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R2049	VRS-CY1JF333J	J	33k 1/16W M-Ox.	AA
R2054	VRS-CY1JF222J	J	2.2k 1/16W M-Ox.	AA
R2055	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
R2060	VRS-CY1JF221J	J	220 1/16W M-Ox.	AA
R2061	VRS-CY1JF562J	J	5.6k 1/16W M-Ox.	AA
R2062	VRS-CY1JF183J	J	18k 1/16W M-Ox.	AA
R2063	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
PWB-A : DUNTK9529WEV6 (19L-M100)									
MAIN UNIT (Continued)									
R2064	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA	HM718	LX-GZ3001PEZZ	R	Screw	AB
R2066	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA	HM719	LX-GZ3001PEZZ	R	Screw	AB
R2067	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA	HM720	LX-GZ3001PEZZ	R	Screw	AB
R2068	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA	HM722	LX-GZ3002PEZZ	R	Screw	AB
R2070	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA	HM724	LX-GZ3002PEZZ	R	Screw	AB
R2101	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA	HM726	LX-GZ3002PEZZ	R	Screw	AB
R2102	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA	HM729	LX-GZ3001PEZZ	R	Screw	AB
R2401	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA	HM730	LX-GZ3001PEZZ	R	Screw	AB
R2402	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA	HM734	LX-GZ3002PEZZ	R	Screw	AB
R2403	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA	HM735	LX-GZ3002PEZZ	R	Screw	AB
R2404	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA	HM739	LX-GZ3002PEZZ	R	Screw	AB
R2501	VRS-CY1JF123J	J	12k 1/16W M-Ox.	AA	HM740	LX-GZ3002PEZZ	R	Screw	AB
R2503	VRS-CY1JF273J	J	27k 1/16W M-Ox.	AA	HM741	LX-GZ3002PEZZ	R	Screw	AB
R2504	VRS-CY1JF123J	J	12k 1/16W M-Ox.	AA	HM742	LX-GZ3002PEZZ	R	Screw	AB
R2505	VRS-CY1JF563J	J	56k 1/16W M-Ox.	AA	HM743	LX-GZ3002PEZZ	R	Screw	AB
R2506	VRS-CY1JF563J	J	56k 1/16W M-Ox.	AA	RDA501	PRDAR0103GJFW	X	Heat Sink, for IC501	AN
R2507	VRS-CY1JF823J	J	82k 1/16W M-Ox.	AA	RDA602	PRDAR0216PEFW	R	Heat Sink, for Q602	AE
R2508	VRS-CY1JF153J	J	15k 1/16W M-Ox.	AA	RDA701	PRDAR0238PEFW	R	Heat Sink, for IC701	AN
R2509	VRS-CY1JF272J	J	2.7k 1/16W M-Ox.	AA	TP701	QLUGP0102PEZZ	R	Lug	AA
R2601	VRD-RA2BE331J	J	330 1/8W Carbon	AA		PZETM0016CEZZ	J	Insulator	AB
						LX-BZ3049GEFD	J	Screw	AA
						LX-BZ3100CEFD	J	Screw	AA
						LX-TZ3004CEFD	J	Screw	AA
SWITCHES									
S2501	QSW-K0079GEZZ	J	Power	AB					
S2502	QSW-K0079GEZZ	J	Vol-Down	AB					
S2503	QSW-K0079GEZZ	J	Vol-Up	AB					
S2504	QSW-K0079GEZZ	J	CH-Down	AB					
S2505	QSW-K0079GEZZ	J	CH-Up	AB					
MISCELLANEOUS PARTS									
△ RY701	RRLYU0036CEZZ	J	Relay	AM					
	or								
	RRLYU0038CEZZ								
	or								
	RRLYJ0077CEZZ								
△ F701	QFS-B4023CEZZ	J	Fuse, 4A(125V)	AC					
	or								
	QFS-B4021GEZZ								
FB602	RBLN-0037CEZZ	J	Ferrite Bead	AB					
FB603	RBLN-0037CEZZ	J	Ferrite Bead	AB					
FH701	QFSHD1013CEZZ	J	Fuse Holder	AC					
	or								
	QFSHD1009CEZZ								
FH702	QFSHD1014CEZZ	J	Fuse Holder	AC					
	or								
	QFSHD1010CEZZ								
J903	QJAKE0159CEZZ	J	Jack, Audio In	AF					
J905	QJAKE0158CEZZ	J	Jack, Video In	AF					
P302	QPLGN0261CEZZ	J	Plug, 2-pin (S)	AB					
P401	QPLGN0561CEZZ	J	Plug, 5-pin (GBN)	AB					
P601	QPLGN0603CEZZ	J	Plug, 6-pin (K)	AB					
P651	QPLGN0361CEZZ	J	Plug, 3-pin	AB					
P701	QPLGN0207CEZZ	J	Plug, 2-pin (M)	AA					
P751	QPLGN0461CEZZ	J	Plug, 4-pin (YBN)	AB					
P2001	QPLGN0561CEZZ	J	Plug, 5-pin	AB					
RMC2601	RRMCU0227CEZZ	J	R/C Receiver	AK					
	or								
	RRMCU0235CEZZ								
	or								
	RRMCU0222CEZZ								
HM601	LX-GZ3002PEZZ	R	Screw	AB					
HM602	LX-GZ3002PEZZ	R	Screw	AB					
HM705	LX-GZ3001PEZZ	R	Screw	AB					
HM706	LX-GZ3001PEZZ	R	Screw	AB					
HM707	LX-GZ3001PEZZ	R	Screw	AB					
HM708	LX-GZ3001PEZZ	R	Screw	AB					
HM711	LX-GZ3001PEZZ	R	Screw	AB					
HM712	LX-GZ3001PEZZ	R	Screw	AB					
HM713	LX-GZ3001PEZZ	R	Screw	AB					
HM714	LX-GZ3001PEZZ	R	Screw	AB					
HM715	LX-GZ3001PEZZ	R	Screw	AB					
HM716	LX-GZ3001PEZZ	R	Screw	AB					
HM717	LX-GZ3001PEZZ	R	Screw	AB					

Ref. No.	Part No.	★	Description	Code
PWB-A : DUNTK9532WEV4 (19L-M100S)				
PWB-A : DUNTK9532WEV5 (CL19M10)				
PWB-A : DUNTK9532WEV6 (20ML10)				
MAIN UNIT				
TUNER				
NOTE: THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY				
△ TU51	VTU115B8035AH	M	Tuner (19L-M100S/CL19M10)	BA
△ TU51	VTU115B8025AM	M	Tuner (20ML10)	BA
INTEGRATED CIRCUITS				
IC101	VHiKA78S05P-1	J	KA78S05P	AD
	or			
▲△ IC201	RH-iX3253CEZZ	J	TA1268AN	AV
	IC351 VHiTDA7233/-1	J	TDA7233	AF
△ IC501	VHiTA8403K/-1	J	TA8403K	AL
▲△ IC701	VHiSTR301301E	J	STR30130	AP
△ IC751	VHiKA7809Pi-1	R	KA7809PI	AE
	or			
△ IC761	VHiTA7809S/-1	R	KA7812PI	AE
	or			
	VHiTA7812S/-1			
IC2001	RH-iX3256CEZZ	J	TMPA8701CMF142	AX
IC2040	VHiPST994C/-1	J	PST994C	AD
IC2101	VHiM24C01B/-1	J	M24C01-BN6	AF
TRANSISTORS				
You can substitute "VS2SC2462-C-1" for "VS2SD601AR/-1".				
Q201	VS2SC2735//1E	J	2SC2735	AC
Q351	VS2SD601AR/-1	J	2SD601AR	AC
Q401	VS2SD601AR/-1	J	2SD601AR	AC
Q403	VS2SD601AR/-1	J	2SD601AR	AC
Q404	VS2SB709AR/-1	J	2SB709AR	AC
Q451	VS2SB709AR/-1	J	2SB709AR	AC
Q501	VS2SD601AR/-1	J	2SD601AR	AC
Q601	VS2SC2655Y/-1	J	2SC2655(Y)	AE
△ Q602	VS2SD2586//1E	J	2SD2586	AM
	or			
Q603	VS2SD2095//1E	J	2SC945A(Q)	AB
	or			
	VS2SC1815YW-1			
	or			
Q752	VS2SC3198-Y-1	J	2SC945A(Q)	AB
	or			
	VS2SC1815YW-1			
	or			
Q753	VS2SA1013//1E	J	2SA1013	AD
Q2001	VS2SD601AR/-1	J	2SD601AR	AC
Q2002	VS2SD601AR/-1	J	2SD601AR	AC
Q2060	VS2SD601AR/-1	J	2SD601AR	AC
DIODES				
You can substitute "RH-DX0045GEZZ" or "RH-DX0446CEZZ" for "VHD1SS119//-1".				
D51	RH-EX0611GEZZ	J	Zener Diode, 5.1V	AA
D52	RH-EX0676GEZZ	J	Zener Diode, 32V	AA
	or			
D53	RH-EX0701GEZZ	J	Zener Diode, 5.1V (19L-M100S/CL19M10)	AA
	RH-EX0611GEZZ	J		AA
D401	VHD1SS119//-1	J	Diode	AB
D402	RH-EX0092CEZZ	J	Zener Diode, 3.9V	AB
D454	RH-EX0103CEZZ	J	Zener Diode, 5.6V	AB
D455	VHD1SS119//-1	J	Diode	AB
D501	RH-DX0441CEZZ	J	Diode	AC

Ref. No.	Part No.	★	Description	Code
	or			
△ D502	RH-DX0110CEZZ	J	Diode	AC
D601	RH-DX0131CEZZ	J	Diode	AC
	or			
D603	RH-DX0110CEZZ	J	Diode	AC
	or			
D631	RH-DX0441CEZZ	J	Diode	AC
	RH-EX0110CEZZ			
D631	RH-EX0630GEZZ	J	Zener Diode, 9.1V	AA
D641	RH-EX0630GEZZ	J	Zener Diode, 9.1V	AA
▲△ D651	RH-DX0131CEZZ	J	Diode	AC
▲△ D652	VHD1SS119//-1	J	Diode	AB
▲△ D653	RH-EX0091CEZZ	J	Zener Diode, 22V	AB
	or			
	RH-EX0660GEZZ			
	or			
△ D661	RH-EX1311CEZZ	J	Diode	AH
△ D701	RH-DX0444CEZZ	J	Diode	AC
△ D702	RH-DX0154CEZZ	J	Diode	AC
△ D703	RH-DX0154CEZZ	J	Diode	AC
△ D704	RH-DX0154CEZZ	J	Diode	AC
D753	RH-DX0154CEZZ	J	Diode	AC
D754	VHD1SS119//-1	J	Diode	AB
D755	VHD1SS119//-1	J	Diode	AB
	or			
△ D756	RH-DX0441CEZZ	J	Diode	AC
	or			
D757	RH-DX0110CEZZ	J	Diode	AB
D758	VHD1SS119//-1	J	Diode	AC
△ D760	RH-DX0131CEZZ	J	Diode	AC
	or			
△ D761	RH-DX0441CEZZ	J	Diode	AC
	or			
△ D762	RH-DX0110CEZZ	J	Diode	AC
	or			
D763	RH-DX0441CEZZ	J	Diode	AB
D2001	VHD1SS119//-1	J	Diode	AB
PACKAGED CIRCUITS				
PR701	RMPTP0026CEZZ	J	Packaged Circuit	AF
X801	RCRSB0205CEZZ	J	Crystal	AF
	or			
	RCRSB0001PEZZ			
FILTERS				
CF301	RFiLC0403CEZZ	J	Ceramic Filter	AE
	or			
CF401	RFiLC0029TAZZ	J	Ceramic Filter	AE
	or			
CF631	RFiLC0013CEZZ	J	Ceramic Filter	AD
CF2040	RFiLA0034PEZZ	J	Ceramic Filter	AD
SF201	RFiLC00121GEZZ	J	Ceramic Filter	AD
	or			
	RFiLC0004PEZZ	J	SAW Filter	AH
COILS				
L201	VP-XF1R2K0000	J	Peaking 1.2μH	AB
L202	RCiLi0612CEZZ	J	VCO Coil	AE
	or			
L301	RCiLi0588CEZZ	J	Peaking 8.2μH	AB
L302	VP-XF8R2K0000	J	IF Coil	AE
	or			
L401	RCiLi0613CEZZ	J		AB
	or			
L401	RCiLi0605CEZZ	J	Peaking 12μH	AB
L402	VP-XF120K0000	J	Peaking 10μH	AB
L406	VP-XF100K0000	J	Peaking 68μH	AB
L408	VP-XF680K0000	J	Peaking 10μH	AB

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
PWB-A : DUNTK9532WEV4 (19L-M100S)									
PWB-A : DUNTK9532WEV5 (CL19M10)									
PWB-A : DUNTK9532WEV6 (20ML10)									
MAIN UNIT (Continued)									
△ L701	RCiLF0029PEZZ	R	Coil (19L-M100S, 20ML10)	AH	C451	RC-QZA563TAYK	J	0.056 50V Mylar	AB
	or				C454	VCEA0A1HW475M	J	4.7 50V EL.	AB
	RCiLF0235CEZZ				C502	VCEA0A1EW477M	J	470 25V EL.	AD
	or				C504	VCKYPA2HB391K	J	390p 500V Ceramic	AA
	RCiLF0087CEZZ				C505	VCQYTA1HM473K	J	0.047 50V Mylar	AB
△ L701	RCiLF0090CEZZ		Coil (CL19M10)		C507	VCKYPA1HB102K	J	1000p 50V Ceramic	AA
L2040	RCiLB0159CEZZ	J	Oscillation Coil	AE	C508	VCEAGA1VW107M	J	100 35V EL.	AC
TRANSFORMERS					C509	VCKYPA2HB102K	J	1000p 500V Ceramic	AA
△ T601	RTRNZ0168CEZZ	J	Transformer	AH	C510	VCEAGA1VW477M	J	470 35V EL.	AD
△△ T602	RTRNF0163PEZZ	R	H-Volt Transformer	BE	C511	VCQYTA1HM473K	J	0.047 50V Mylar	AB
	or				C513	VCEACA1HC225M	J	2.2 50V EL.	AC
	RTRNF0149PEZZ				C514	VCEACA1HC225J	J	2.2 50V EL.	AC
△ T701	RTRNP0527CEZZ	J	Power Transformer	AM	C517	VCKYCY1HB102K	J	1000p 50V Ceramic	AA
	or				C522	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
	RTRNP0518CEZZ				C551	VCSATA1CE225K	J	2.2 16V Tantalum	AB
CAPACITORS					C552	VCEA0A1HW225M	J	2.2 50V EL.	AB
<i>[EL... Electrolytic, M-Poly... Metalized Polypro Film]</i>					C604	VCEA0A1CW227M	J	220 16V EL.	AC
C51	VCEA0A1CW476M	J	47 16V EL.	AB	△△ C608	VCFPD3CA802H	J	8000p 1.6kV M-Poly.	AF
C52	VCSATA1CE226K	J	22 16V Tantalum	AD	C609	RC-QZA223TAYK	J	0.022 50V Mylar	AB
C53	VCEA0A1HW105M	J	1.0 50V EL.	AB	C612	VCFPD2EB474J	J	0.47 250V M-Poly.	AF
C54	VCEA0A1HW475M	J	4.7 50V EL.	AB	C631	VCEA0A1HW225M	J	2.2 50V EL.	AB
			(19L-M100S/CL19M10)		C632	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C54	VCEA0A1HW225M	J	2.2 50V EL.	AB	C633	VCEA0A1HW105M	J	1.0 50V EL.	AB
			(20ML10)		C652	VCEA0A1HW475M	J	4.7 50V EL.	AB
C55	VCEA0A1CW477M	J	470 16V EL.	AC	C653	VCEA0A1CW106M	J	10 16V EL.	AB
			(19L-M100S/CL19M10)		C661	VCKYPA2HB152K	J	1500p 500V Ceramic	AA
C55	VCEAGA1CW108M	J	1000 16V EL.	AD	C662	VCEA0A1CW477M	J	470 16V EL.	AC
			(20ML10)		△ C701	RC-FZ027SCEZZ	J	0.047 AC125V Plastic	
C201	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA		or			
C202	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA		RC-FZ015SCEZZ			
C203	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA		or			
C204	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA		RC-FZ002SCEZZ			
C205	VCEA0A1HW474M	J	0.47 50V EL.	AB		or			
C206	VCEA0A1CW227M	J	220 16V EL.	AC		RC-FZ059SCEZZ			
C207	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA		or			
C208	VCEA0A1HW474M	J	0.47 50V EL.	AB		RC-FZ004SGEZZ			
C209	VCKYCY1HB222K	J	2200p 50V Ceramic	AA		or			
C210	VCKYCY1HB102K	J	1000p 50V Ceramic	AA		RC-FZ027CUMZZ			
C302	VCCCCY1HH330J	J	33p 50V Ceramic	AA	C702	VCKYPB2HE103P	J	0.01 500V Ceramic	AB
C303	VCKYCY1HB472K	J	4700p 50V Ceramic	AA	C703	VCKYPB2HE103P	J	0.01 500V Ceramic	AB
C304	VCEA0A1HW225M	J	2.2 50V EL.	AB	C704	VCKYPB2HE103P	J	0.01 500V Ceramic	AB
C305	VCKYPA1HB151K	J	150p 50V Ceramic	AA	△ C705	RC-EZ0422CEZZ	J	470 200V EL.	AN
C306	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA		or			
C308	VCKYCY1HB102K	J	1000p 50V Ceramic	AA		RC-EZ0522CEZZ			
C309	VCEA0A1CW227M	J	220 16V EL.	AC	△ C706	RC-KZ0092GEZZ	J	3300p AC125V Ceramic	AC
C312	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA		or			
C314	VCEA0A1HW225M	J	2.2 50V EL.	AB		RC-KZ0311CEZZ			
C351	VCKYCY1HB562K	J	5600p 50V Ceramic	AA	C707	VCEAGA2CW226M	J	22 160V EL.	AD
C352	VCEA0A1CW107M	J	100 16V EL.	AC	△ C712	RC-EZ0638CEZZ	J	33 160V EL.	AG
C353	VCEA0A1CW337M	J	330 16V EL.	AC	C751	VCEA0A1VW477M	J	470 35V EL.	AB
C354	RC-QZA104TAYK	J	0.1 50V Mylar	AB	C754	VCEA0A1CW337M	J	330 16V EL.	AC
C355	VCEA0A1CW226M	J	22 16V EL.	AB	C755	VCEA0A1CW107M	J	100 16V EL.	AC
C361	VCEA0A1CW477M	J	470 16V EL.	AC	C756	VCEAGA1CW108M	J	1000 16V EL.	AD
C362	VCEA0A1CW476M	J	47 16V EL.	AB	C757	RC-QZA104TAYK	J	0.1 50V Mylar	AB
C403	VCCCCY1HH101J	J	100p 50V Ceramic	AA	△ C758	VCEAGA2EW106M	J	10 250V EL.	AC
C404	VCCCCY1HH680J	J	68p 50V Ceramic	AA	C760	VCEAGA1CW108M	J	1000 16V EL.	AD
C405	VCEA0A1HW335M	J	3.3 50V EL.	AB	C801	RC-QZA223TAYK	J	0.022 50V Mylar	AB
C406	VCEA0A1HW335M	J	3.3 50V EL.	AB	C802	VCEA0A1HW474M	J	0.47 50V EL.	AB
C407	RC-QZA104TAYK	J	0.1 50V Mylar	AB	C803	VCCCCY1HH120J	J	12p 50V Ceramic	AA
C408	VCEA0A1CW106M	J	10 16V EL.	AB	C804	VCEA0A1HW104M	J	0.1 50V EL.	AB
C409	VCEA0A1HW105M	J	1.0 50V EL.	AB	C805	VCEA0A1HW104M	J	0.1 50V EL.	AB
C410	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C806	VCEA0A1HW104M	J	0.1 50V EL.	AB
C411	VCEAGA1CW108M	J	1000 16V EL.	AD	C807	VCCCCY1HH820J	J	82p 50V Ceramic	AA
C413	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA	C901	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA
C414	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA	C905	VCEA0A1HW335M	J	3.3 50V EL.	AB
C419	VCCCCY1HH330J	J	33p 50V Ceramic	AA	C2001	VCCCCY1HH101J	J	100p 50V Ceramic	AA
C420	VCCCCY1HH471J	J	470p 50V Ceramic	AA	C2002	VCCCCY1HH101J	J	100p 50V Ceramic	AA
					C2021	VCCCCY1HH101J	J	100p 50V Ceramic	AA
					C2022	VCCCCY1HH101J	J	100p 50V Ceramic	AA
					C2023	VCCCCY1HH101J	J	100p 50V Ceramic	AA
					C2024	VCCCCY1HH101J	J	100p 50V Ceramic	AA
					C2040	VCEA0A1AW107M	J	100 10V EL.	AB
					C2041	VCEA0A1HW105M	J	1.0 50V EL.	AB
					C2051	VCCCCY1HH101J	J	100p 50V Ceramic	AA
					C2060	RC-QZA104TAYK	J	0.1 50V Mylar	AB
					C2061	VCKYD41HB101K	J	100p 50V Ceramic	AA

Ref. No.	Part No.	★	Description	Code
PWB-A : DUNTK9532WEV4 (19L-M100S)				
PWB-A : DUNTK9532WEV5 (CL19M10)				
PWB-A : DUNTK9532WEV6 (20ML10)				
MAIN UNIT (Continued)				

C2062	VCEA0A1AW107M	J	100	10V	EL.	AB
C2402	VCCCCY1HH560J	J	56p	50V	Ceramic	AA
C2601	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C2602	VCCCCY1HH101J	J	100p	50V	Ceramic	AA
RESISTORS						
<i>[M-Ox... Metal Oxide, M-Film ... Metal Film]</i>						
RJ1	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ3	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ5	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ6	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ7	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ9	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ10	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ15	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ17	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ18	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ19	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ20	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ21	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ23	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ24	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ26	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ31	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ32	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ35	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ39	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ40	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ46	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ49	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ52	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ54	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ55	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ57	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ59	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ62	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ63	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ66	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ67	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ68	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ69	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ71	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ75	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ77	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ78	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ79	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
△ R51	VRS-VV3AB331J	J	330	1W	M-Ox.	AA
				(19L-M100S/CL19M10)		
△ R51	VRS-VV3DB151J	J	150	2W	M-Ox.	AA
				(20ML10)		
△ R52	VRS-VV3DB470J	J	47	2W	M-Ox.	AA
				(19L-M100S/CL19M10)		
△ R52	VRS-VV3DB1R0J	J	1.0	2W	M-Film	AB
				(20ML10)		
△ R53	VRS-VV3LB223J	J	22k	3.0W	M-Ox.	AB
R54	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R55	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R56	VRS-CY1JF823J	J	82k	1/16W	M-Ox.	AA
R57	VRS-CY1JF392J	J	3.9k	1/16W	M-Ox.	AA
				(19L-M100S/CL19M10)		
R57	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
				(20ML10)		
R201	VRS-CY1JF221J	J	220	1/16W	M-Ox.	AA
R202	VRS-CY1JF122J	J	1.2k	1/16W	M-Ox.	AA
R203	VRD-RA2BE682J	J	6.8k	1/8W	Carbon	AA
R204	VRS-CY1JF270J	J	27	1/16W	M-Ox.	AA
R205	VRD-RA2BE391J	J	390	1/8W	Carbon	AA
R206	VRD-RA2EE151J	J	150	1/4W	Carbon	AA
R208	VRS-CY1JF391J	J	390	1/16W	M-Ox.	AA

R301	VRD-RA2BE222J	J	2.2k	1/8W	Carbon	AA
R302	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R303	VRS-CY1JF153J	J	15k	1/16W	M-Ox.	AA
R307	VRS-CY1JF333J	J	33k	1/16W	M-Ox.	AA
R352	VRS-CY1JF332J	J	3.3k	1/16W	M-Ox.	AA
R353	VRS-CY1JF4R7J	J	4.7	1/16W	M-Ox.	AA
R354	VRS-CY1JF152J	J	1.5k	1/16W	M-Ox.	AA
R361	VRD-RA2BE102J	J	1.0k	1/8W	Carbon	AA
R364	VRS-CY1JF473J	J	47k	1/16W	M-Ox.	AA
R401	VRS-CY1JF682J	J	6.8k	1/16W	M-Ox.	AA
R403	VRD-RA2BE331J	J	330	1/8W	Carbon	AA
R404	VRS-CY1JF391J	J	390	1/16W	M-Ox.	AA
R407	VRS-CY1JF471J	J	470	1/16W	M-Ox.	AA
R409	VRS-CY1JF471J	J	470	1/16W	M-Ox.	AA
R410	VRD-RA2BE563J	J	56k	1/8W	Carbon	AA
R411	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R412	VRD-RA2EE561J	J	560	1/4W	Carbon	AA
R413	VRD-RA2BE470J	J	47	1/8W	Carbon	AA
R414	VRD-RA2BE470J	J	47	1/8W	Carbon	AA
R415	VRD-RA2BE470J	J	47	1/8W	Carbon	AA
R416	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R417	VRD-RA2BE101J	J	100	1/8W	Carbon	AB
R418	VRS-CY1JF152J	J	1.5k	1/16W	M-Ox.	AA
R419	VRS-CY1JF472J	J	4.7k	1/16W	M-Ox.	AA
R423	VRS-CY1JF222J	J	2.2k	1/16W	M-Ox.	AA
R426	VRS-CY1JF271J	J	270	1/16W	M-Ox.	AA
R440	VRS-CY1JF821J	J	820	1/16W	M-Ox.	AA
△ R451	VRS-SV2HC103J	J	10k	1/2W	M-Ox.	AA
R452	VRD-RA2BE152J	J	1.5k	1/8W	Carbon	AA
R454	VRD-RA2BE334J	J	330k	1/8W	Carbon	AA
R455	VRD-RA2BE392J	J	3.9k	1/8W	Carbon	AA
R456	VRS-CY1JF223J	J	22k	1/16W	M-Ox.	AA
R457	VRD-RA2BE102J	J	1.0k	1/8W	Carbon	AA
R458	VRD-RA2BE334J	J	330k	1/8W	Carbon	AA
R459	VRD-RA2BE123J	J	12k	1/8W	Carbon	AA
R504	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R505	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R506	VRD-RA2BE683G	J	68k	1/8W	Carbon	AA
R507	VRD-RA2BE104G	J	100k	1/8W	Carbon	AA
R508	VRD-RA2BE473J	J	47k	1/8W	Carbon	AA
R510	VRD-RM2HD1R2J	J	1.2	1/2W	Carbon	AA
△ R511	VRN-SV2HB1R5J	J	1.5	1/2W	M-Film	AB
R512	VRD-RM2HD681J	J	680	1/2W	Carbon	AA
R516	VRD-RA2BE683G	J	68k	1/8W	Carbon	AA
R517	VRD-RA2BE103G	J	10k	1/8W	Carbon	AA
R518	VRD-RA2BE154J	J	150k	1/8W	Carbon	AA
R524	VRS-CY1JF332J	J	3.3k	1/16W	M-Ox.	AA
R525	VRD-RA2BE473J	J	47k	1/8W	Carbon	AA
R552	VRD-RA2BE102J	J	1.0k	1/8W	Carbon	AA
R553	VRS-CY1JF273J	J	27k	1/16W	M-Ox.	AA
R554	VRS-CY1JF472J	J	4.7k	1/16W	M-Ox.	AA
R555	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R556	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R602	VRD-RA2EE820J	J	82	1/4W	Carbon	AA
△ R603	VRS-VV3LB220J	J	22	3.0W	M-Ox.	AB
R605	VRS-CY1JF332J	J	3.3k	1/16W	M-Ox.	AA
R606	VRD-RA2BE102J	J	1.0k	1/8W	Carbon	AA
R608	VRD-RA2BE101J	J	100	1/8W	Carbon	AB
R609	VRD-RA2BE331J	J	330	1/8W	Carbon	AA
△ R610	VRS-VV3DB391J	J	390	2W	M-Ox.	AA
R620	VRD-RA2BE473J	J	47k	1/8W	Carbon	AA
R621	VRS-CY1JF682J	J	6.8k	1/16W	M-Ox.	AA
R631	VRS-CY1JF391J	J	390	1/16W	M-Ox.	AA
R632	VRS-CY1JF152J	J	1.5k	1/16W	M-Ox.	AA
R633	VRS-CY1JF472J	J	4.7k	1/16W	M-Ox.	AA
R634	VRD-RM2HD121J	J	120	1/2W	Carbon	AA
△ R641	VRS-VV3AB682J	J	6.8k	1W	M-Ox.	AA
R642	VRD-RA2BE821J	J	820	1/8W	Carbon	AA
▲▲ R651	VRD-RM2HD1R0J	J	1.0	1/2W	Carbon	AA
▲▲ R654	VRD-RA2BE154J	J	150k	1/8W	Carbon	AA
▲▲ R655	VRS-CY1JF104J	J	100k	1/16W	M-Ox.	AA
▲▲ R656	VRS-CY1JF273J	J	27k	1/16W	M-Ox.	AA
△ R659	VRN-VV3AB1R0J	J	1.0	1W	M-Film	AA
△ R661	VRN-VV3ABR47J	J	0.47	1W	M-Film	AA

Ref. No.	Part No.	★	Description	Code	Ref. No.	Part No.	★	Description	Code
PWB-A : DUNTK9532WEV4 (19L-M100S)					R2067	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
PWB-A : DUNTK9532WEV5 (CL19M10)					R2068	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
PWB-A : DUNTK9532WEV6 (20ML10)					R2070	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA
MAIN UNIT (Continued)					R2101	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
△ R701	RR-HZ0046CEZZ	J	2.7M 1/2W Solid	AD	R2102	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
	or				R2401	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
	RR-DZ0047CEZZ				R2402	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
	or				R2403	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
	VRC-UB2HG275K				R2404	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA
△ R702	VRW-KP3HC1R8K	J	1.8 5W Cement	AC	R2501	VRS-CY1JF123J	J	12k 1/16W M-Ox.	AA
△ R703	VRS-KA3NG681J	J	680 7.0W M-Ox.	AF	R2503	VRS-CY1JF273J	J	27k 1/16W M-Ox.	AA
R704	VRD-RM2HD123J	J	12k 1/2W Carbon	AA	R2504	VRS-CY1JF123J	J	12k 1/16W M-Ox.	AA
R705	VRD-RA2EE334J	J	330k 1/4W Carbon	AA	R2505	VRS-CY1JF563J	J	56k 1/16W M-Ox.	AA
R706	VRD-RM2HD470J	J	4.7 1/2W Carbon	AA	R2506	VRS-CY1JF563J	J	56k 1/16W M-Ox.	AA
△ R707	VRN-VV3DB1R5J	J	1.5 2W M-Film	AB	R2507	VRS-CY1JF823J	J	82k 1/16W M-Ox.	AA
△ R708	VRD-RM2HD824J	J	820k 1/2W Carbon	AA	R2508	VRS-CY1JF153J	J	15k 1/16W M-Ox.	AA
△ R709	VRS-KA3NG681J	J	680 7.0W M-Ox.	AF	R2509	VRS-CY1JF272J	J	2.7k 1/16W M-Ox.	AA
△ R711	VRS-KA3NG681J	J	680 7.0W M-Ox.	AF	R2601	VRD-RA2BE331J	J	330 1/8W Carbon	AA
△ R717	VRS-KA3HG3R3K	J	3.3 5W M-Ox.	AD	SWITCHES				
△ R730	VRS-VV3DB270J	J	27 2W M-Ox.	AA	S2501	QSW-K0079GEZZ	J	Power	AB
△ R750	VRS-VV3AB561J	J	560 1W M-Ox.	AA	S2502	QSW-K0079GEZZ	J	Vol-Down	AB
R752	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA	S2503	QSW-K0079GEZZ	J	Vol-Up	AB
R754	VRS-CY1JF471J	J	470 1/16W M-Ox.	AA	S2504	QSW-K0079GEZZ	J	CH-Down	AB
△ R755	VRS-VV3DB470J	J	47 2W M-Ox.	AA	S2505	QSW-K0079GEZZ	J	CH-Up	AB
R757	VRS-CY1JF472J	J	4.7k 1/16W M-Ox.	AA	MISCELLANEOUS PARTS				
△ R758	VRS-SV2HC100J	J	10 1/2W M-Ox.	AA	△ RY701	RRLYU0036CEZZ	J	Relay	AM
R801	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA		or			
R802	VRS-CY1JF332J	J	3.3k 1/16W M-Ox.	AA		RRLYU0038CEZZ			
R803	VRS-CY1JF182J	J	1.8k 1/16W M-Ox.	AA		or			
R804	VRS-CY1JF182J	J	1.8k 1/16W M-Ox.	AA		RRLYU0077CEZZ			
R805	VRS-CY1JF182J	J	1.8k 1/16W M-Ox.	AA	△ F701	QFS-B4023CEZZ	J	Fuse, 4A(125V)	AC
R806	VRS-CY1JF333J	J	33k 1/16W M-Ox.	AA		or			
R902	VRS-CY1JF750J	J	75 1/16W M-Ox.	AA		QFS-B4021GEZZ			
R906	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA	FB602	RBLN-0037CEZZ	J	Ferrite Bead	AB
R925	VRS-CY1JF104J	J	100k 1/16W M-Ox.	AA	FB603	RBLN-0037CEZZ	J	Ferrite Bead	AB
R961	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA	FH701	QFSHD1013CEZZ	J	Fuse Holder	AC
R962	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA		or			
R2001	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA		QFSHD1013CEZZ			
R2002	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA	FH702	QFSHD1014CEZZ	J	Fuse Holder	AC
R2006	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA		or			
R2007	VRD-RA2BE223J	J	22k 1/8W Carbon	AA		QFSHD1010CEZZ			
R2008	VRD-RA2BE224J	J	220k 1/8W Carbon	AA	J903	QJAKE0159CEZZ	J	Jack, Audio IN	AF
R2009	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA	J905	QJAKE0158CEZZ	J	Jack, Video IN	AF
R2010	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA	P302	QPLGN0261CEZZ	J	Plug, 4-pin (S)	AB
R2011	VRS-CY1JF821J	J	820 1/16W M-Ox.	AA	P401	QPLGN0561CEZZ	J	Plug, 5-pin (GBN)	AB
R2012	VRS-CY1JF471J	J	470 1/16W M-Ox.	AA	P601	QPLGN0603CEZZ	J	Plug, 6-pin (K)	AB
R2020	VRD-RM2HD223J	J	22k 1/2W Carbon	AA	P651	QPLGN0361CEZZ	J	Plug, 3-pin	AB
R2022	VRD-RA2BE333J	J	33k 1/8W Carbon	AA	P701	QPLGN0207CEZZ	J	Plug, 2-pin (M)	AA
R2024	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA	P751	QPLGN0461CEZZ	J	Plug, 4-pin (YBN)	AB
R2025	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA	P2001	QPLGN0561CEZZ	J	Plug, 5-pin	AB
R2026	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA	RMC2601	RRMCU0227CEZZ	J	R/C Receiver	AK
R2027	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA		or			
R2028	VRD-RA2BE102J	J	1.0k 1/8W Carbon	AA		RRMCU0235CEZZ			
R2029	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA		or			
R2032	VRS-CY1JF471J	J	470 1/16W M-Ox.	AA		RRMCU0222CEZZ			
R2033	VRD-RA2BE103J	J	10k 1/8W Carbon	AA	HM601	LX-GZ3002PEZZ	R	Screw	AB
R2040	VRS-CY1JF102J	J	1.0k 1/16W M-Ox.	AA	HM602	LX-GZ3002PEZZ	R	Screw	AB
R2041	VRS-CY1JF333J	J	33k 1/16W M-Ox.	AA	HM705	LX-GZ3001PEZZ	R	Screw	AB
R2042	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA	HM706	LX-GZ3001PEZZ	R	Screw	AB
R2043	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA	HM707	LX-GZ3001PEZZ	R	Screw	AB
R2044	VRS-CY1JF683J	J	68k 1/16W M-Ox.	AA	HM708	LX-GZ3001PEZZ	R	Screw	AB
R2045	VRS-CY1JF101J	J	100 1/16W M-Ox.	AA	HM711	LX-GZ3001PEZZ	R	Screw	AB
R2047	VRS-CY1JF221J	J	220 1/16W M-Ox.	AA	HM712	LX-GZ3001PEZZ	R	Screw	AB
R2048	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA	HM713	LX-GZ3001PEZZ	R	Screw	AB
R2049	VRS-CY1JF333J	J	33k 1/16W M-Ox.	AA	HM714	LX-GZ3001PEZZ	R	Screw	AB
R2054	VRS-CY1JF222J	J	2.2k 1/16W M-Ox.	AA	HM715	LX-GZ3001PEZZ	R	Screw	AB
R2055	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA	HM716	LX-GZ3001PEZZ	R	Screw	AB
R2060	VRS-CY1JF221J	J	220 1/16W M-Ox.	AA	HM717	LX-GZ3001PEZZ	R	Screw	AB
R2061	VRS-CY1JF562J	J	5.6k 1/16W M-Ox.	AA	HM718	LX-GZ3001PEZZ	R	Screw	AB
R2062	VRS-CY1JF183J	J	18k 1/16W M-Ox.	AA	HM719	LX-GZ3001PEZZ	R	Screw	AB
R2063	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA	HM720	LX-GZ3001PEZZ	R	Screw	AB
R2064	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA	HM722	LX-GZ3002PEZZ	R	Screw	AB
R2066	VRS-CY1JF103J	J	10k 1/16W M-Ox.	AA	HM724	LX-GZ3002PEZZ	R	Screw	AB

Ref. No.	Part No.	★	Description	Code
PWB-A : DUNTK9532WEV4 (19L-M100S)				
PWB-A : DUNTK9532WEV5 (CL19M10)				
PWB-A : DUNTK9532WEV6 (20ML10)				
MAIN UNIT (Continued)				
HM726	LX-GZ3002PEZZ	R	Screw	AB
HM729	LX-GZ3001PEZZ	R	Screw	AB
HM730	LX-GZ3001PEZZ	R	Screw	AB
HM734	LX-GZ3002PEZZ	R	Screw	AB
HM735	LX-GZ3002PEZZ	R	Screw	AB
HM739	LX-GZ3002PEZZ	R	Screw	AB
HM740	LX-GZ3002PEZZ	R	Screw	AB
HM741	LX-GZ3002PEZZ	R	Screw	AB
HM742	LX-GZ3002PEZZ	R	Screw	AB
HM743	LX-GZ3002PEZZ	R	Screw	AB
RDA501	PRDAR0103GJFW	X	Heat Sink, for IC501	AN
RDA602	PRDAR0216PEFW	R	Heat Sink, for Q602	AE
RDA701	PRDAR0238PEFW	R	Heat Sink, for IC701	AN
TP701	QLUGP0102PEZZ	R	Lug	AA
	PZETM0016CEZZ	J	Insulator	AB
	LX-BZ3049GEFD	J	Screw	AA
	LX-BZ3100CEFD	J	Screw	AA
	LX-TZ3004CEFD	J	Screw	AA

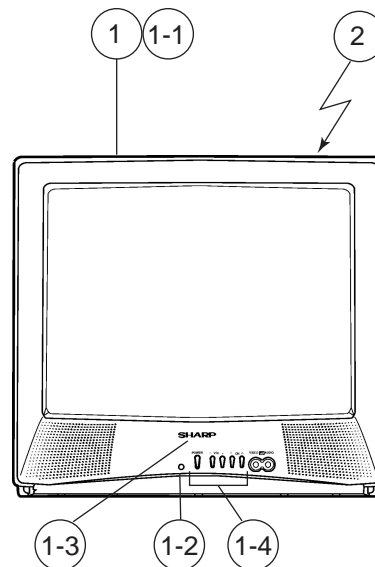
Ref. No.	Part No.	★	Description	Code
PWB-B : DUNTK9530WEV6 (19L-M100)				
CRT UNIT				
TRANSISTORS				
Q852	VS2SC2229O/1E	J	2SC2229 (O)	AD
Q854	VS2SC2229O/1E	J	2SC2229 (O)	AD
Q856	VS2SC2229O/1E	J	2SC2229 (O)	AD
Q881	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
	or			
	VS2SA1015Y/1E			
DIODES				
You can substitute "RH-DX0045GEZZ" or "VHD-DX0446CEZZ" for "VHD1SS119/-1".				
D881	VHD1SS119/-1	J	Diode	AB
D882	VHD1SS119/-1	J	Diode	AB
D885	VHD1SS119/-1	J	Diode	AB
COIL				
L851	VP-DF151K0000	J	Peaking 150μH	AB
CAPACITORS				
<i>[EL.... Electrolytic]</i>				
C851	VCCCCY1HH271J	J	270p 50V Ceramic	AA
C852	VCCCCY1HH271J	J	270p 50V Ceramic	AA
C853	VCCCCY1HH271J	J	270p 50V Ceramic	AA
C854	RC-KZ0029CEZZ	J	0.01 1.4kV Ceramic	AC
C881	VCEA0A1CW106M	J	10 16V EL.	AB
C883	VCEA0A1CW336M	J	33 16V EL.	AB
RESISTORS				
<i>[M-Ox.... Metal Oxide]</i>				
R851	VRS-CY1JF470J	J	47 1/16W M-Ox.	AA
R852	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R853	VRS-CY1JF121J	J	120 1/16W M-Ox.	AA
△ R857	VRS-VV3AB123J	J	12k 1W M-Ox.	AA
R858	VRD-RM2HD332J	J	3.3k 1/2W Carbon	AA
R859	VRS-CY1JF470J	J	47 1/16W M-Ox.	AA
R860	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R861	VRS-CY1JF121J	J	120 1/16W M-Ox.	AA
△ R865	VRS-VV3AB123J	J	12k 1W M-Ox.	AA
R866	VRD-RM2HD332J	J	3.3k 1/2W Carbon	AA
R867	VRD-RA2BE470J	J	47 1/8W Carbon	AA
R868	VRS-CY1JF221J	J	220 1/16W M-Ox.	AA
R869	VRS-CY1JF121J	J	120 1/16W M-Ox.	AA
△ R873	VRS-VV3AB123J	J	12k 1W M-Ox.	AA
R874	VRD-RM2HD332J	J	3.3k 1/2W Carbon	AA
R881	VRS-CY1JF561J	J	560 1/16W M-Ox.	AA
R882	VRS-CY1JF391J	J	390 1/16W M-Ox.	AA
R883	VRD-RA2BE561J	J	560 1/8W Carbon	AA
R884	VRS-CY1JF152J	J	1.5k 1/16W M-Ox.	AA
R886	VRS-CY1JF431J	J	430 1/16W M-Ox.	AA
R887	VRS-CY1JF470J	J	47 1/16W M-Ox.	AA
MICELLANEOUS PARTS				
P851	QPLGN0561CEZZ	J	Plug, 5-pin (GBN)	AB
P852	QPLGN0461CEZZ	J	Plug, 4-pin (YBN)	AB
SC851	QSOCV0841CEZZ	J	CRT Socket	

Ref. No.	Part No.	★	Description	Code
PWB-B : DUNTK9533WEV4 (19L-M100S, CL19M10, 20ML10) CRT UNIT				
TRANSISTORS				
Q852	VS2SC2229O/1E	J	2SC2229 (O)	AD
Q854	VS2SC2229O/1E	J	2SC2230 (O)	AD
Q856	VS2SC2229O/1E	J	2SC2231 (O)	AD
Q881	VS2SA1266-Y-1	J	2SA1266 (Y)	AA
	or			
	VS2SA1015Y/1E			
DIODES				
You can substitute "RH-DX0045GEZZ" or "VHD-DX0446CEZZ" for "VHD1SS119/-1".				
D881	VHD1SS119/-1	J	Diode	AB
D882	VHD1SS119/-1	J	Diode	AB
D885	VHD1SS119/-1	J	Diode	AB
COIL				
L851	VP-DF151K0000	J	Peaking 150μH	AB
CAPACITORS [EL... Electrolytic]				
C851	VCCCCY1HH271J	J	270p 50V Ceramic	AA
C852	VCCCCY1HH271J	J	270p 50V Ceramic	AA
C853	VCCCCY1HH271J	J	270p 50V Ceramic	AA
C854	RC-KZ0029CEZZ	J	0.01 1.4kV Ceramic	AC
C881	VCEA0A1CW106M	J	10 16V EL.	AB
C883	VCEA0A1CW336M	J	33 16V EL.	AB
RESISTORS [M-Ox... Metal Oxide]				
R851	VRS-CY1JF470J	J	47 1/16W M-Ox.	AA
R852	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R853	VRS-CY1JF121J	J	120 1/16W M-Ox.	AA
△ R857	VRS-VV3AB123J	J	12k 1W M-Ox.	AA
R858	VRD-RM2HD332J	J	3.3k 1/2W Carbon	AA
R859	VRD-RA2BE470J	J	47 1/8W Carbon	AA
R860	VRS-CY1JF221J	J	220 1/16W M-Ox.	AA
R861	VRS-CY1JF121J	J	120 1/16W M-Ox.	AA
△ R865	VRS-VV3AB123J	J	12k 1W M-Ox.	AA
R866	VRD-RM2HD332J	J	3.3k 1/2W Carbon	AA
R867	VRS-CY1JF470J	J	47 1/16W M-Ox.	AA
R868	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R869	VRS-CY1JF121J	J	120 1/16W M-Ox.	AA
△ R873	VRS-VV3AB123J	J	12k 1W M-Ox.	AA
R874	VRD-RM2HD332J	J	3.3k 1/2W Carbon	AA
R881	VRS-CY1JF561J	J	560 1/16W M-Ox.	AA
R882	VRS-CY1JF391J	J	390 1/16W M-Ox.	AA
R883	VRD-RA2BE561J	J	560 1/8W Carbon	AA
R884	VRS-CY1JF152J	J	1.5k 1/16W M-Ox.	AA
R886	VRS-CY1JF431J	J	430 1/16W M-Ox.	AA
R887	VRS-CY1JF470J	J	47 1/16W M-Ox.	AA

MICELLANEOUS PARTS				
P851	QPLGN0561CEZZ	J	Plug, 5-pin (GBN)	AB
P852	QPLGN0461CEZZ	J	Plug, 4-pin (YBN)	AB
SC851	QSOCV0929CEZZ	J	CRT Socket	AM
	or			
	QSOCV0933CEZZ			

Ref. No.	Part No.	★	Description	Code
CABINET PARTS				
1	CCABA0004WEH0	X	Front Cabinet Ass'y (19L-M100, 19L-M100S)	
1	CCABA0004WEH2	X	Front Cabinet Ass'y (CL19M10)	
1	CCABA0006WEH0	X	Front Cabinet Ass'y (20ML10)	
1-1	Not Available	—	Front Cabinet	—
1-2	GCOVA0003GJSA	X	Cover for R/C	
1-3	HBDBG1001GJSA	X	Badge, "SHARP"	
1-4	JBTN-0003GJSA	X	Button	
2	GCABB0003GJKA	X	Rear Cabinet	

CABINET PARTS LOCATION



Ref. No.	Part No.	★	Description	Code
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MISCELLANEOUS PARTS

△	ACC701	QACCD3064CESA	M	AC Cord	AM
		or			
		QACCD3060CESA			
	QCNW-2110PEZZ	R	Connecting Cord	AG	
			(19L-M100)		
	QCNW-2111PEZZ	R	Connecting Cord	AF	
	QCNW-2112PEZZ	R	Connecting Cord	AF	
	QCNW-2160PEZZ	R	Connecting Cord	AG	
			(19L-M100S, CL19M10, 20ML10)		
SP1	VSP0080PBK98A	M	Speaker, 8 ohm	AG	
	or				
	VSP0080P-E98S				

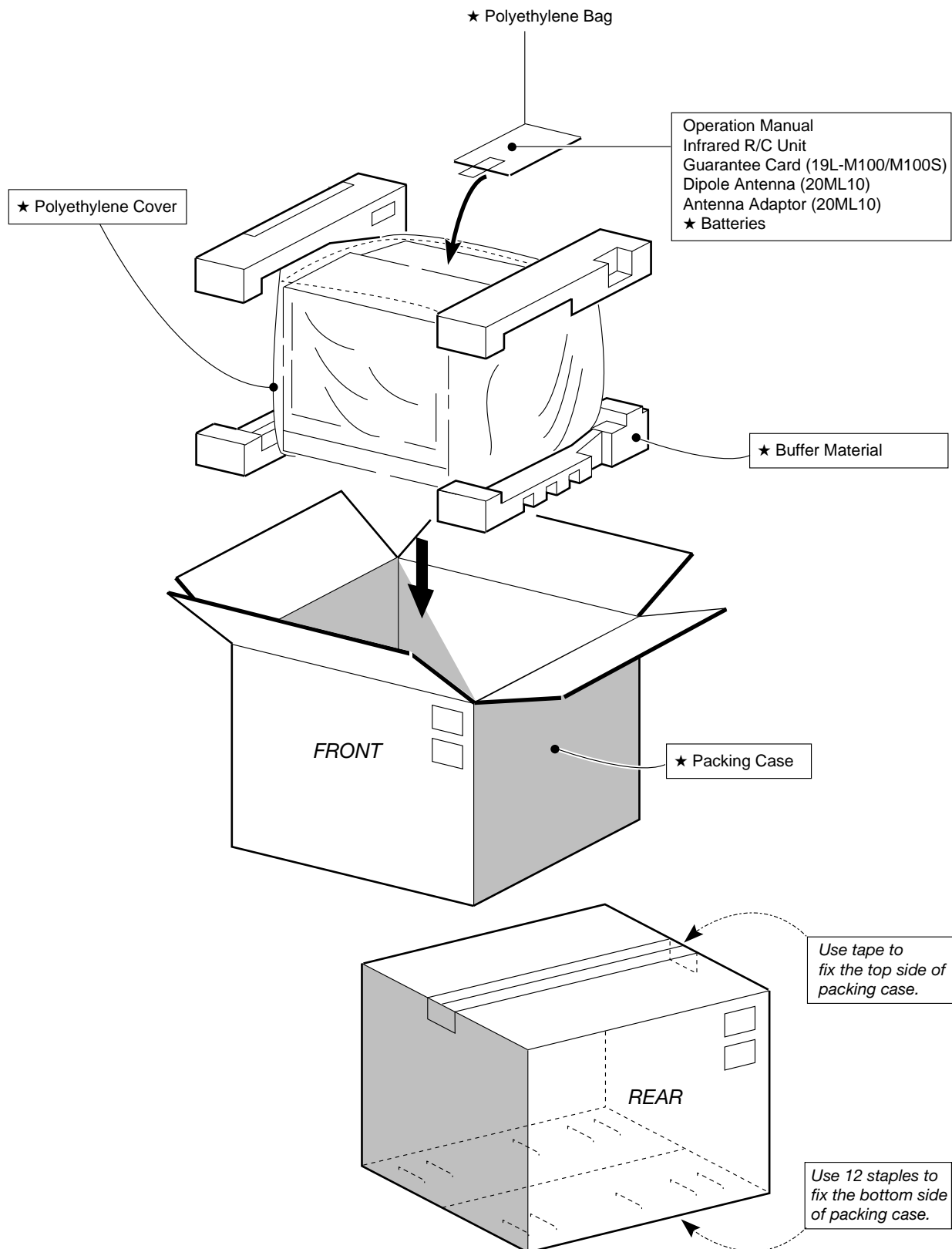
SUPPLIED ACCESORRIES

	TGAN-0001GJZZ	X	Guarantee Card		
			(19L-M100, 19L-M100S)		
	TiNS-6563GJZZ	X	Operation Manual		
			(19L-M100, 19L-M100S)		
	TiNS-6564GJZZ	X	Operation Manual		
			(CL19M10)		
	TiNS-6565GJZZ	X	Operation Manual		
			(20ML10)		
	RRMCG1324CESA	M	Infrared R/C Unit	AT	
			(19L-M100/M100S,CL19M10)		
	RRMCG1339CESA	M	Infrared R/C Unit	(20ML10) AT	
	RUNTK0165CEZZ	M	Antenna Adaptor (20ML10)	AM	
	QANTR0018PEZZ	M	Dipole Antenna (20ML10)		

PACKING PARTS (NOT REPLACEMENT ITEM)

	SPAKC0004GJZZ	-	Packing Case	—	
			(19L-M100, 19L-M100S)		
	SPAKC0007GJZZ	-	Packing Case (CL19M10)	—	
	SPAKC0006GJZZ	-	Packing Case (20ML10)	—	
	SPAKP0001GJZZ	-	Polyethylene Cover	—	
	SPAKX0003GJZZ	-	Buffer Material	—	
	SSAKA0101GJZZ	-	Polyethylene Bag	—	

PACKING OF THE SET



★ MARK : Not replacement items.

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